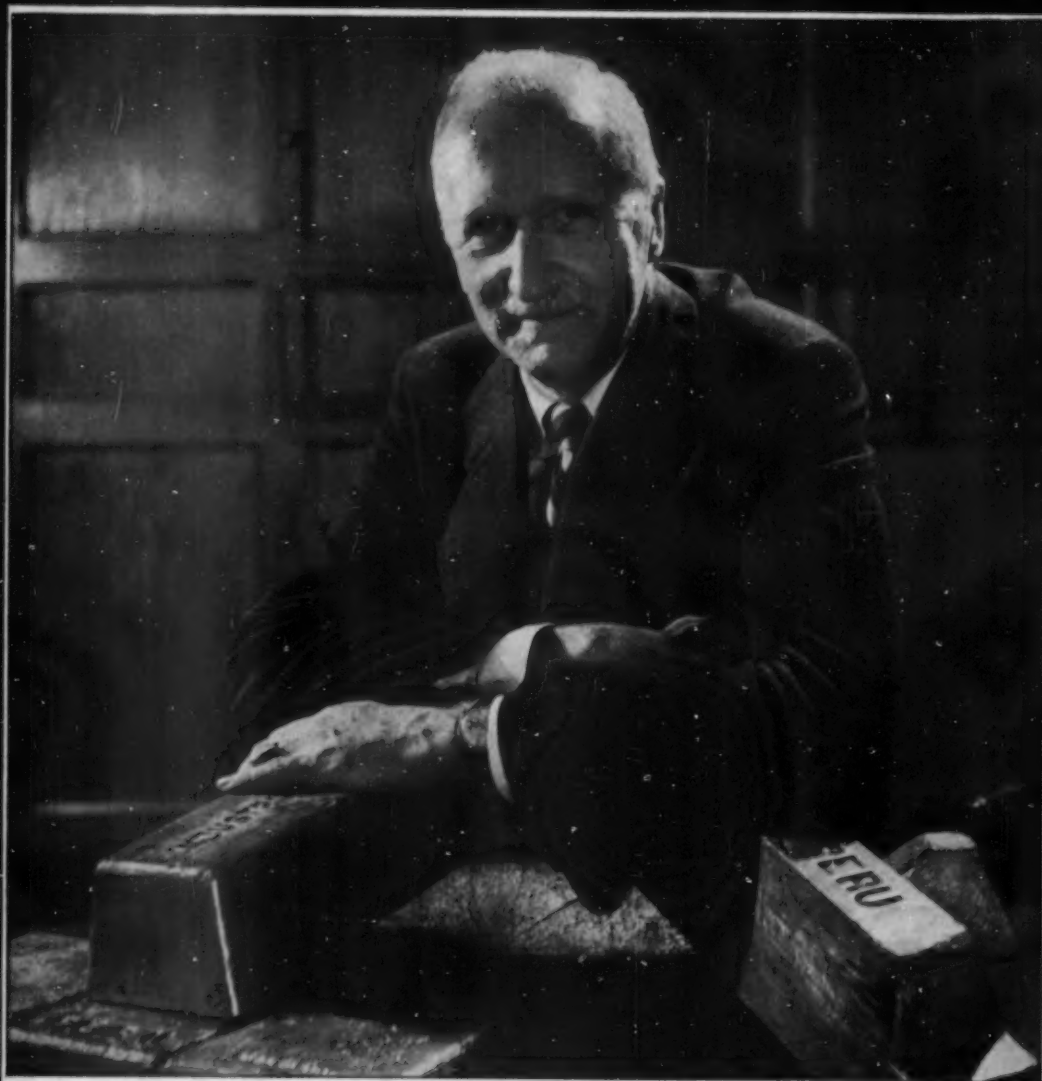


BUSINESS WEEK

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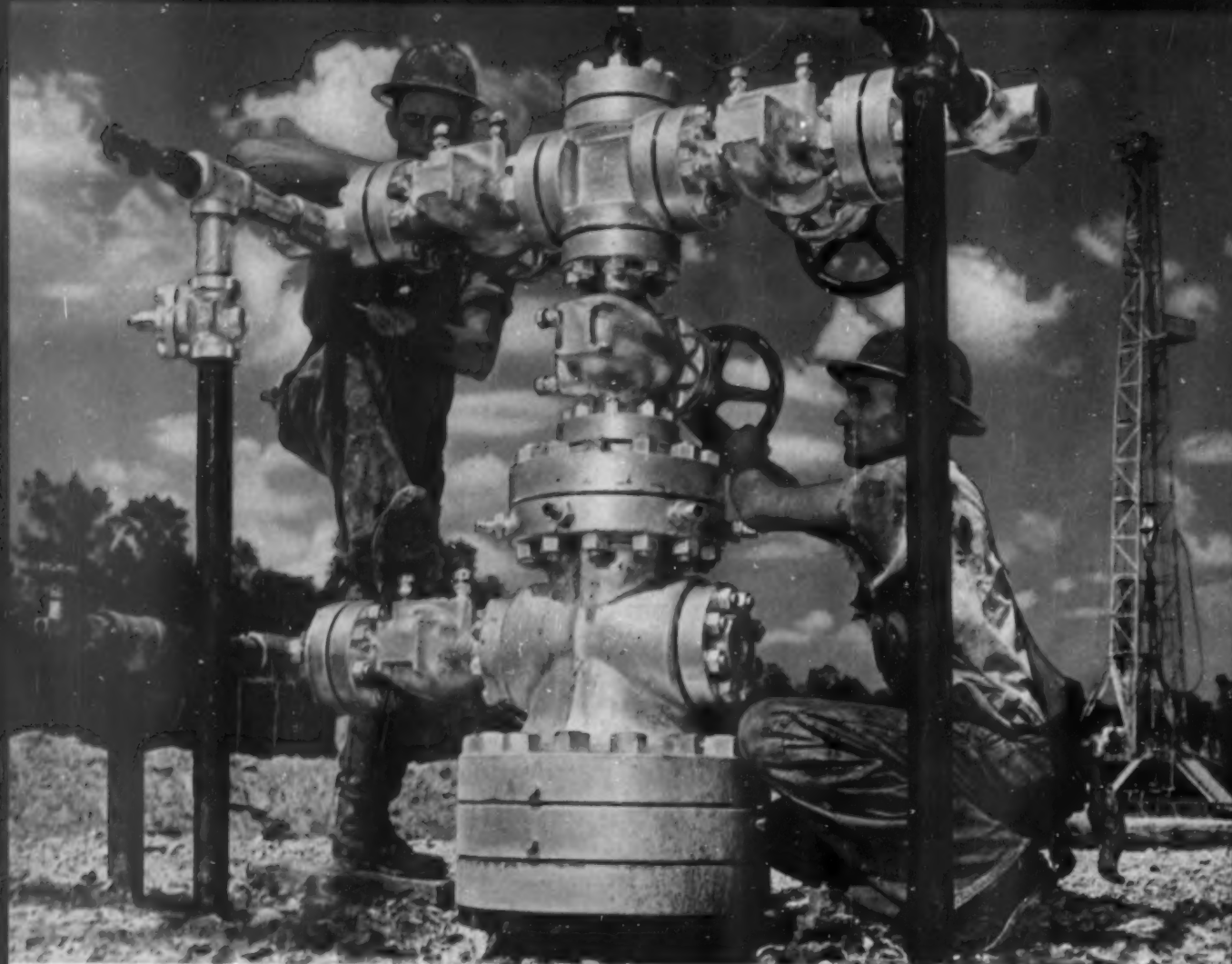


Cerro de Pasco's Koenig: In mining, jump when you see something good (page 142)

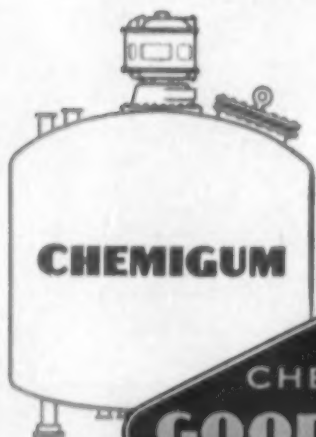
A MCGRAW HILL PUBLICATION

OCT 22, 1955

E B POWER
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C



Something new under the Christmas tree



THIS Christmas "tree" is a complicated arrangement of valves, fittings and gauges. It's standard equipment on wells to control the flow of oil. What's new is the blend of **CHEMIGUM** and **PLIOFLEX** used in the soles of the shoes worn by the driller and his crew.

CHEMIGUM is a nitrile rubber. **PLIOFLEX** is a styrene rubber. Used alone, **CHEMIGUM** makes possible the most oil-resistant type shoe soles. **PLIOFLEX** also makes excellent shoe soles, but for general use. Together they provide a sole better in combined oil-resistance and wearing properties than that provided by other types of rubbers or blends—and at much lower cost.

CHEMIGUM spells oil-resistance in capital letters. **PLIOFLEX** spells long wear at low cost. Why not put them together to spell **TOP QUALITY** for your product, be it shoe soles, hose, belting, molded goods or any rubber product exposed to oil? For details write to:

Goodyear, Chemical Division, Dept. J-9415, Akron 16, Ohio

Chemigum, Pliobond, Plioflex, Pliolite, Plio-tuf, Pliovic — T. M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

The Finest Chemicals for Industry — **CHEMIGUM • PLIOBOND • PLIOFLEX • PLIOLITE • PLIO-TUF • PLIOVIC • WING-CHEMICALS**



Private Microwave System—Bell System microwave equipment helps a midwest power company operate smoothly, act quickly.



Telemetering Channels—Electric power moves around interconnected system under guidance of dispatchers. Bell System telemetering supervisory control and voice channels permit the operators in this load dispatcher's office to supervise and control the inter-exchange of kilowatts at remote locations 24 hours a day.

WE SHRINK DISTANCE

Bell System communications help draw together the far-flung units of the nation's power lines, pipe lines and railroads.

An increasing part of the Bell System's business is providing communications for the specialized needs of the nation's power lines, pipe lines and railroads. As these needs expand, so, too, does Bell System service.

The facilities of these industries stretch across great distances. Yet they must be able to contact any point immediately and make information available quickly from one end of the line to the other.

All require quick, reliable communications. Yet each has specialized problems. We tailor our communication services to fit their exact individual needs.

The Bell System can meet all their communications requirements. Among the things we provide are:

- Private Line Telephone Services
- Teletypewriter Service
- Mobile Radio Facilities

We also supply the channels for:

- Telemetering
- Supervisory Control
- Industrial TV
- Facsimile

And we are continually developing new and better services for all types of businesses. We want to help them meet the new communications problems that accompany their change and growth.



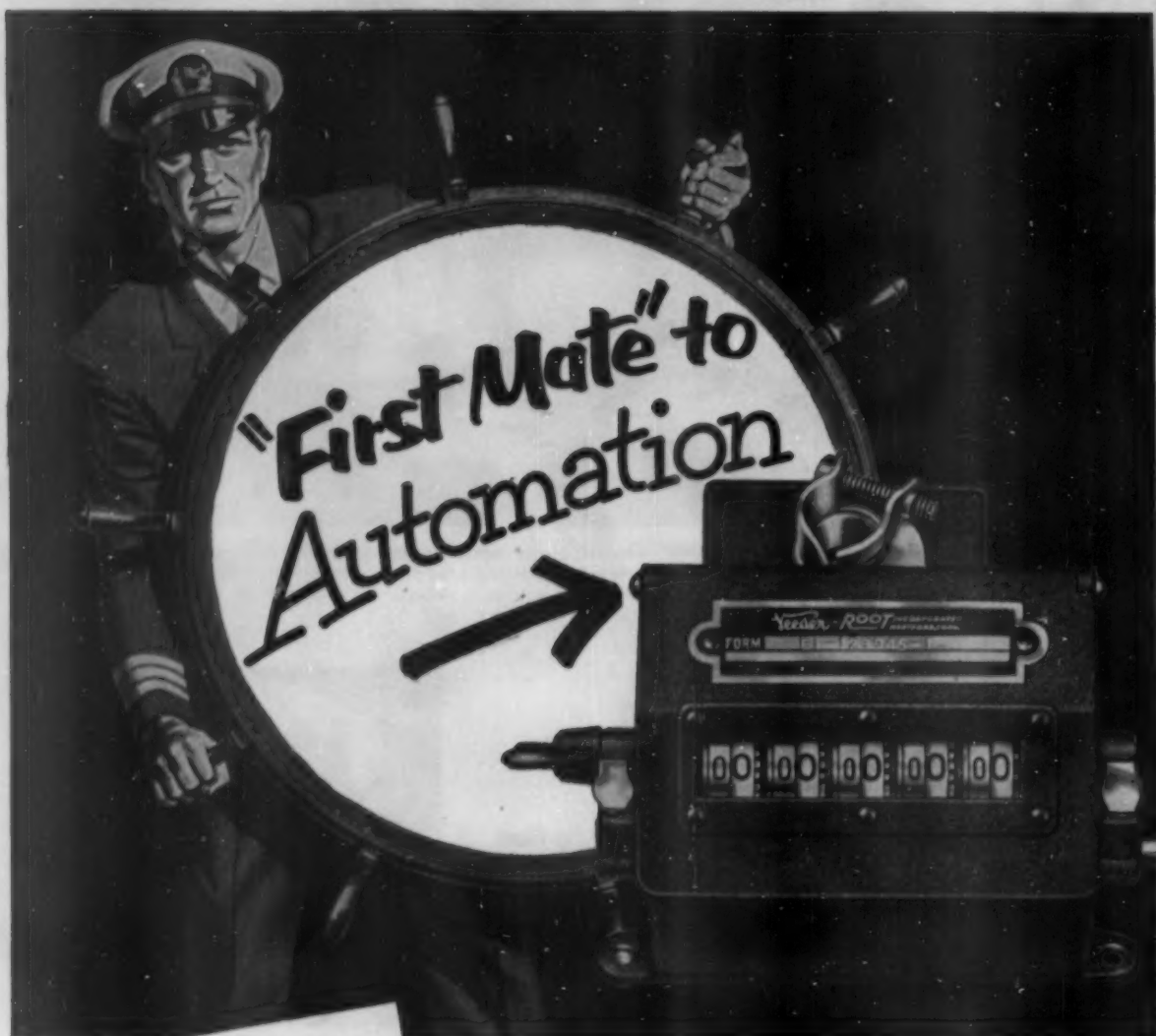
Mobile Telephones for Pipe Liners—It is important that field men in the pipeline industry be able to make reports immediately and on the spot. Bell System provides mobile facilities for their trucks and cars.



Teletypewriter Cuts Rail Schedules—An extensive Bell System teletypewriter system is enabling one eastern railroad to cut Chicago to New York freight schedules up to 24 hours. Advance information speeds up train departures.

Bell Telephone System





**Added Evidence
that...**

Everyone Can Count on VEEDER-ROOT

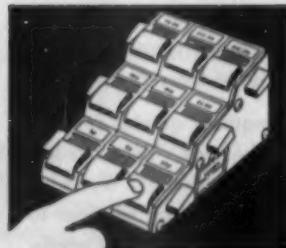
In figuring out new systems of automatic electrical control, Veeder-Root Control can supply vital connecting links. For instance, this Predetermining Counter can be hooked into such a system to light a light, ring a bell, or actuate a mechanism to stop a machine or process at any pre-set point. And there are many other Veeder-Root Counters that can serve as "count-ponents" in almost any way desired. Or special counters can be designed for specific applications. Engineers in any industry, now engaged in working out automatic control systems, can count on Veeder-Root engineers to work with them on any problem where reliable facts-in-figures are needed.

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John Wanamaker store in Wynnewood, Pa., near Philadelphia. Architects: Wallace and Warner. Heating Contractor: Daniel J. Keating Company.

A Great Store CHOOSES WEBSTER Once More!

John Wanamaker's in Philadelphia was one of the earliest installations of the Webster Vacuum System of Steam Heating. Kept modern, it is still in service. Now, the newest Wanamaker's ultra-modern Wynnewood, Pa., store is Webster-heated, too.

At Wynnewood, Wanamaker's uses Webster Unit Heaters to provide winter-long comfort for discriminating shoppers.

Said Brig. Gen. Brenton G. Wallace, of Wallace and Warner, architects: "Webster service is an important ingredient in the success of the heating installation at Wanamaker's, Wynnewood".

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Webster Heating Equipment includes Webster Tru-Perimeter Heating with Webster Walvector or Webster Baseboard; Convecter Radiation; Steam Heating and Process Steam Specialties; Webster Moderator Systems of Steam Heating and continuous flow controls for hot water heating — both with outdoor thermostat. Data on request.

BUSINESS WEEK • OCTOBER 22 • NUMBER 1364

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Only STEEL



It's a "Fun Tree". Children love to clamber over weird-looking objects, so finally a special "Fun Tree" at Lakeside Park, Oakland, Calif., has been built for that very purpose. The framework is made from steel pipe and metal lath, and is covered with plaster.

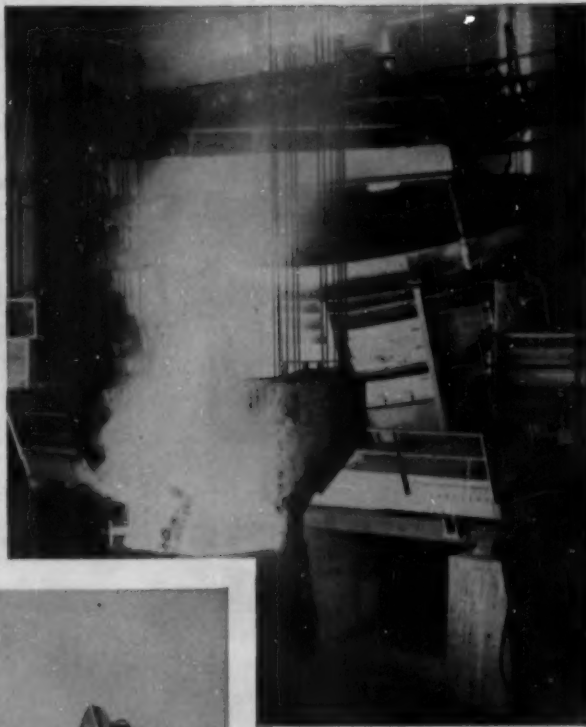
can do so many jobs so well



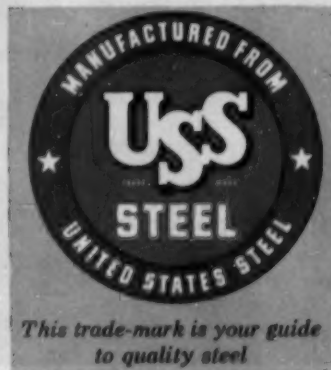
Adequate Wiring—sealed in steel.

This man is pulling electrical cable through rigid steel conduit. It's the safest wiring method known: the rigid steel conduit protects the cable, and it protects the building against disastrous electrical fires. United States Steel makes a complete line of steel pipe for rigid conduit and electrical cable.

It Floats. This new steel ironing table floats right over milady's lap. The legs are offset to provide plenty of knee room. The steel tube legs are light and strong, can be adjusted to any convenient height for sitting or standing.



Biggest in the World. It takes 33 million watts of electrical power to operate this 24½-foot-diameter electric melting furnace. It's the largest such furnace ever built, and it holds 400,000 pounds of steel. United States Steel designed and manufactured the furnace for a new, modern steel mill.



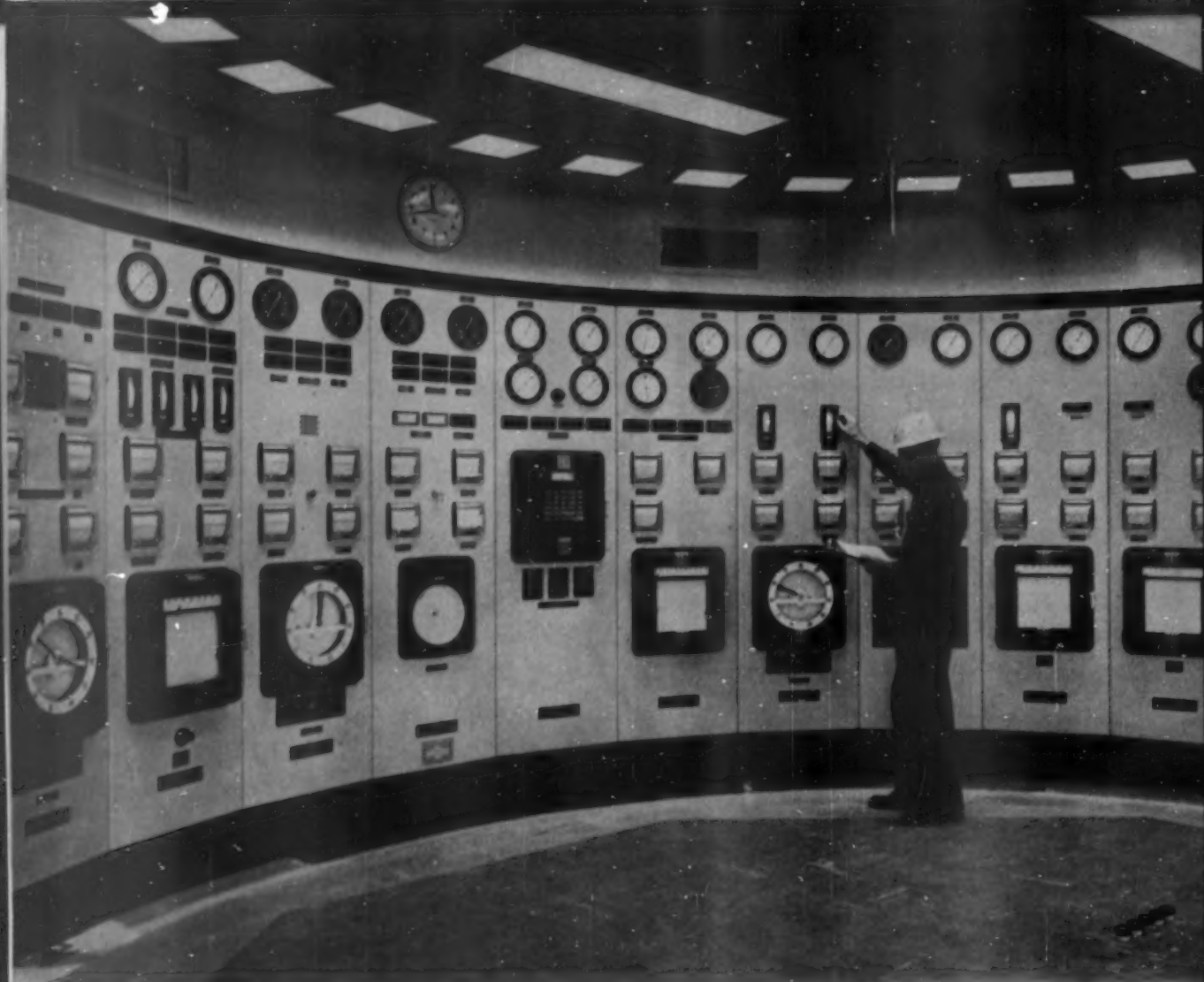
This trade-mark is your guide to quality steel

UNITED STATES STEEL

For further information on any product mentioned in this advertisement, write United States Steel, 525 William Penn Place, Pittsburgh, Pa.

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UNITED STATES STEEL HOMES, INC. • UNION SUPPLY COMPANY • UNITED STATES STEEL EXPORT COMPANY • UNIVERSAL ATLAS CEMENT COMPANY 9-1289

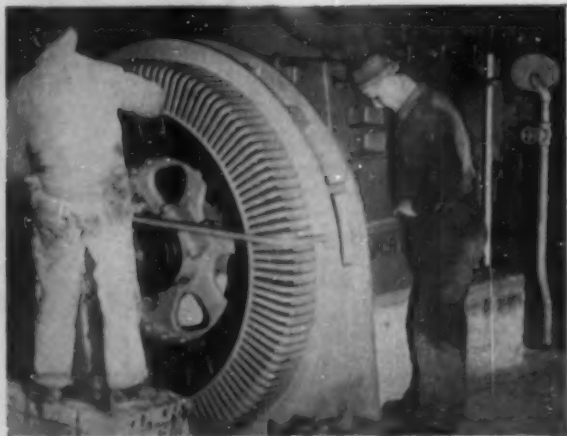
THE UNITED STATES STEEL HOUR. It's a full-hour TV program presented every other week by United States Steel. Consult your local newspaper for time and station.



TYPICAL AUTOMATIC CONTROL SET-UP. Pretty, but it's only as good as the basic machinery supporting this type of operation. That's equipment like Worthington's compressors, gas- and steam-jet ejectors, pumps, engines, refrigeration and power transmission equipment, and steam turbines, shouldering the *real* load continuously — *reliably*.



MORE THAN 100 INDUSTRIAL GASES are handled by Worthington compressors like this high-pressure unit used in ammonia synthesis. They also supply air for air-operated valves, presses and other actuators, and for the miles of pneumatic tubing that carry control signals in today's automatic factory.



HYDRAULIC POWER FOR A SEAMLESS TUBE MILL in a large Eastern metal working plant is supplied by this Worthington power pump. Power pumps like this one supply high-pressure fluids for operation of presses, process charge, and many other industrial applications.

Is automation "all chiefs, no Indians"?

Automatic operations still rely on basic work-performing machines

You hear a lot these days about marvelous new mechanical or electronic "brains" that schedule the movements of a milling cutter to half a thousandth . . . or program the operations of an entire factory.

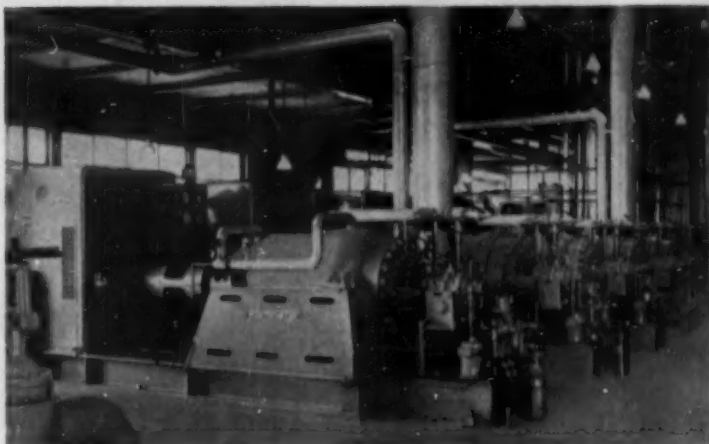
These new control systems are wonderful in themselves, and they've come a longer way from the laboratory stage than most people think.

Let's not forget, however, that automation still has to have muscles to make it work. Prime movers and actuators are as much a part of today's automatic factory as of yesterday's manually operated plant—and they must be even more reliable and durable for unattended operation.

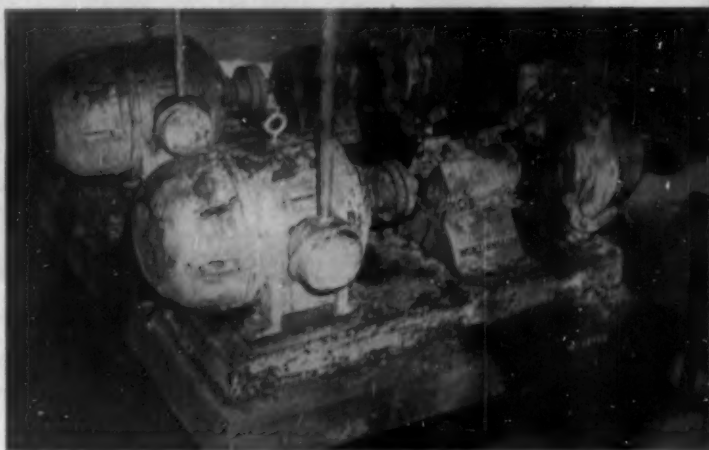
That's why many of the first and most highly automated industries chose Worthington equipment for closed-loop operations. It's why you find Worthington steam turbines, pumps, blowers, compressors, jet ejectors and engines hard at work in general industry as well as in oil refineries, chemical plants, and in other continuous and batch process industries. Far from the public eye, they're quietly pushing through the automatic control program of the more glamorous "brain."

\$300 million for automation

More than \$300 million will have been spent in automating plants in 1955—more in 1956. If some of this is *your* money, why not take a good look at your present *basic* machinery before installing a new control system? Re-evaluate your equipment in terms of your new capacity and reliability requirements—and specify Worthington where you demand the most. Worthington Corporation, Harrison, New Jersey.



TV-MONITORED BOILERS in 600,000-kw power plant are fed by these Worthington pumps. All plant operations are supervised at central control board where 12 TV screens show operation of burners, boilers and water gauges.



ALL BY THEMSELVES, these Worthington centrifugal pumps work continuously in Southern paper mill—one operating, the other on standby service. They're typical of thousands of Worthington centrifugal pumps handling liquids of all types in process industries.

WORTHINGTON



THE SIGN OF VALUE AROUND THE WORLD

AIR CONDITIONING AND REFRIGERATION • COMPRESSORS • CONSTRUCTION EQUIPMENT • ENGINES • DEAERATORS • INDUSTRIAL MIXERS
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FOR EVERY
ELECTRICAL &
ELECTRONIC
PRODUCT



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Engineered wire for everything electrical or electronic—that is Belden's business. Hair-like filaments to wind the tiny transformers for transistors or heavy magnet wires for utility transformers two stories high—power supply cords for the smallest appliances, like your shaver—up to heavy duty electric tools and equipment.

For welders, for planes, for electronic brains—Belden has the wire for the job—Belden quality means lowest over-all cost.

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Chicago 80, Illinois

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Cord Sets and Portable Cord

Aircraft Wires

Electrical Household

Replacement Cords

Electronic Wires

Welding Cable

Automotive Replacement

Wire and Cable

READERS REPORT

Mystical Forecasting

Dear Sir:

Congratulations on the special report on Business Forecasting [BW—Sep. 24 '55, p90]. The article was stimulating and challenging. An ideal solution may be the cultivation of a breed of "Josephs" who could interpret dreams and thereby predict the seven "lean" or "fat" years. This would fall under the "mystic" heading perhaps.

A practical approach might be similar to the recent trend of "Operation Research" experts which combine the mathematics of engineers and the historical tabulations of public and cost accountants. The article seemed to overlook the forecasting aid potential that may be available from research engineers and accountants.

Finally, in this age of automation, perhaps some economic factor gadgets could be attached to a Univac and a push button future will develop.

RUBIN L. GOREWITZ

NEW YORK, N. Y.

Dear Sir:

May I correct a factual error in your excellent article on Business Forecasting. William Flaherty is not with the Ford Motor Co., but is Economist for the Chrysler Corp., where he has made outstanding contributions in developing methods forecasting automobile demand.

ERNEST DALE

ASSOC. PROF. OF BUSINESS

ADMINISTRATION

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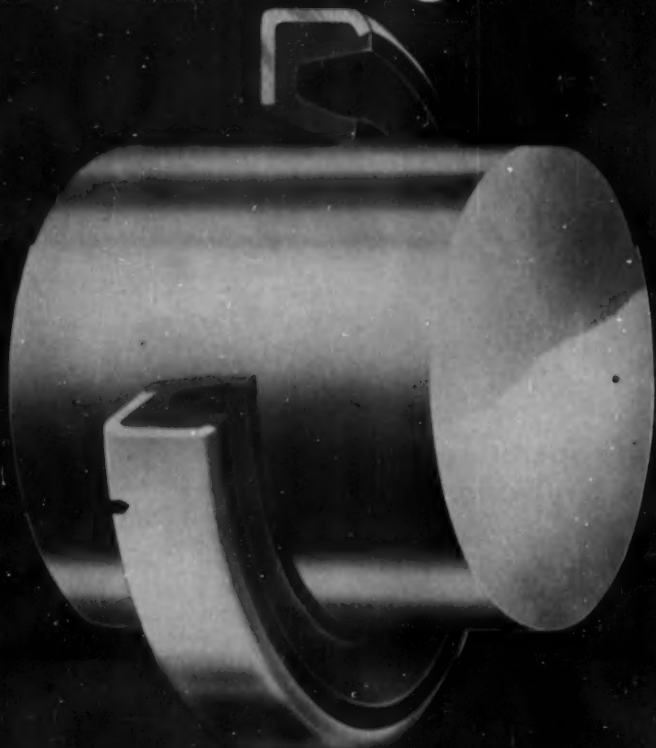
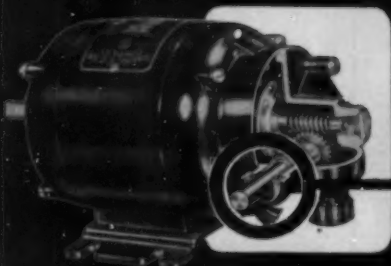
• Thank you, Reader Dale. This has been corrected in the reprints of the special report.

Flight Fright

Dear Sir:

I was quite interested in your recent article concerning commercial flying [BW—Sep. 17 '55, p183—Personal Business]. I flew as a stewardess with American Airlines for 18 months, and during that time I often wished that all the passengers we carried could have had the excellent training I had at American's stewardess school in Chicago. Of course, this is not possible, but I think you'll agree with

Soft-pedals the drag!



NEW C/R OIL SEAL PREVENTS FRICTIONAL LOSS IN BODINE GEAR REDUCERS

Minimizing torsional drag is essential for efficient transmission of power over a wide range of speeds. The specially developed C/R Oil Seal used on the output shaft of Bodine gear reducer Motors meets the requirements of this leading manufacturer for a long-life precision unit. This seal provides greater power efficiency, requires no adjustment, assures positive sealing of the gear lubricant with the motor in any position. Of special importance is the compactness of its Sirvene (synthetic rubber) sealing member, which makes it possible to have positive, long-life sealing where restricted axial housing space prevents the use of any standard type seal. For over 30 years, C/R Engineers have made such applications a successful specialty... solving all types of tough sealing problems encountered in the industrial, automotive and equipment fields. Our Engineers would welcome the opportunity to be of assistance to you, too. We would like to send a copy of "C/R Perfect Oil Seals" as a get-acquainted gesture... just write, we'll mail it promptly.



PERFECT
Oil Seals

More automobiles, farm and industrial machines rely on C/R Oil Seals than on any similar sealing device

CHICAGO RAWHIDE MANUFACTURING COMPANY

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EXPORT SALES: GEON INTERNATIONAL CORP., GREAT NECK, NEW YORK

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SIRVENE: (Synthetic rubber) diaphragms, boots, gaskets and similar parts for critical operating conditions • CONFOR: Controlled porosity mechanical leather packings and other sealing products • SIRVIS: Mechanical leather boots, gaskets, packings and related products.

**Setol Cleanser HAS WHAT IT TAKES
TO MACHINE-SCRUB OILY FLOORS—**



***Faster
cleaning action!***



Cuts operating time of the scrubbing machine

Because *Setol* is specially compounded for the greater speed of combination-machine-scrubbing, it must and does work faster than average alkaline cleansers. *Setol* saponifies and emulsifies grimy oil and grease *instantaneously*. The wetting agent in *Setol* floats the oil for fast, easy, and thorough removal by the vac of a combination machine or with a separate vac unit. And because *Setol* stays fast-acting longer—does not spend its strength quickly as do ordinary oil and grease solvents—less is required to clean a given area. Thus *Setol* saves on materials and,

- A constant, fast-acting cleanser for machine-scrubbing cement, wood, wood block, metal, stone, and terrazzo floors
- Consistent use on cement floors prevents cement dusting . . . provides a finish that helps seal out waste materials



Finnell 213P
Scrubber-Vac

by speeding the cleaning process, cuts operating time of the scrubbing machine . . . reduces labor costs . . . and saves on brushes. Best of all, *Setol* gets floors oil-free clean! Also acts as a disinfectant (contains pine oil), and leaves a pleasant, clean aroma.

For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or *Finnell System, Inc.*, 3816 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.

*Originators of
Power Scrubbing and Polishing Machines*

FINNELL

BRANCHES
IN ALL
PRINCIPAL
CITIES

me that fright is mainly a lack of understanding of a situation. For instance, if you knew there were a rattlesnake in your path and saw it, you could . . . do something about it, but if you didn't know and kept wondering . . . well you may be the worrying kind.

At the age of 19 I took a flight from Philadelphia, Pa. to Parkersburg, W. Va. in December when the weather was terrible, and I must admit I was quite scared and almost sick. Two years later, when I was a stewardess, I flew through much worse weather and can truly say that I was never once frightened. We had such thorough training and understood the weather conditions and what a DC-6 can do, that it didn't even faze me. And I was not the unusual. All my fellow stewardesses felt the same way.

I know that airlines try awfully hard to make the passenger forget about himself with magazines, conversation, and nice looking stewardesses. However, all this doesn't help much if a person doesn't understand the fundamentals of flying, and on a flight the stewardess can not possibly take the time to explain all this to each person. . . .

There is no easy solution to this problem, but I think one way out would be a series of articles in a national magazine [explaining] the same sort of things we were taught. . . . It's pretty awful to see a grown man [who] has been through the worst battles in World War II and the Korean War, cringe for seven hours on a plane in the smoothest weather.

PAT TANNER

MIDLAND, TEX.

Eclectic Controversy

Dear Sir:

I wish to call your attention to a . . . viciously false statement contained in your article *Rural Clinic: Can It Cure Doctor Shortage?* [BW—Aug. 20'55, p154].

Quoting from page 160: "Unworried—The only doctor in Perry County today is Dr. Stanley Gutowski, one of Arkansas' 125 eclectic doctors—the professional name of any doctor who lacks a full four years of medical school."

. . . There are more than three thousand physicians who have graduated from eclectic medical colleges in the U. S., and I can say without fear of challenge that not one of these graduates spent less than four years in a standard, recognized medical college. Further, their medical training was

Had to re-order this item lately?



Working capital! Even the healthiest companies need an *occasional* transfusion of this life-blood of business, via bank loans or stock issues.

But when there's a *chronic* shortage, it usually means that corporate anemia has set in. Routine operations seem like mighty efforts. Opportunities slip by — for the patient has lost the power to act.

In many such cases, Keysort punched-card accounting works wonders.

For it often happens that the cause of chronic working-capital shortage lies right in a company's own inventory. Too much money is tied up in raw materials, in-process goods, unshipped products.

Keysort factory control can show you *on time* when and where an unnecessary inventory bulge is developing. Thus you keep inventory lean, and use the money saved to nourish working capital.

A McBee Keysort installation can give you comprehensive, accurate reports on every phase of factory operation, and give them to you *fast*. Daily, weekly, monthly — as your needs require. Whether you run a 100-man branch plant, or an industrial titan. At low cost.

The trained McBee man near you has a presentation which will show you how it's done. *It takes just one hour, from start to finish.* Phone him or write us.

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Offices in principal cities • In Canada: The McBee Company, Ltd., 179 Bartley Drive, Toronto 16, Ontario



"WOW! What happened to our labor cost on this run?"

How many times—and how recently—have you asked this question? It's a good one, with a lot of possible answers. The important thing is, can these skyrocketing costs happen again, or have the causes been corrected? Often the answer is very simple—and easily remedied.

Could this be your answer?

A batch of castings or forgings with cracks that nobody found until costly hours had been wasted machining and finishing them . . . a heat treat that went sour . . . improper grinding, handling, cleaning, all are possibilities, and all can vary from run to run.

Cracks, whatever the cause, run up your labor costs if you don't find them early enough. Early enough

to find and correct the cause before parts are run and finished in quantity, only to be scrapped.

Inspection is low cost with Magnaflux' Methods and it finds all cracks . . . helps you find the cure. It can save you many times its trifling cost.

Ask to have a Magnaflux engineer give you the facts and figures—or write for new booklet on LOWER MANUFACTURING COST.



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Dallas 19 • Los Angeles 58

MAGNAFLUX

equal to the best, and it has proved their quality as practitioners in every state of the U. S.

I am sure that it was not your intention to classify graduates of eclectic medical colleges as sub-standard medical practitioners. For this reason, I respectfully request a retraction of the statement.

JOHN C. HUBBARD, M. D.
CORRESPONDING SECRETARY
THE NATIONAL ECLECTIC MEDICAL
ASSN.
OKLAHOMA CITY, OKLA.

• BW had no intention of making a "viciously false statement." Our checking indicates that standards for eclectic doctors differ in various parts of the country. In Arkansas, which we were writing about, an eclectic doctor is "a graduate of a medical school that is not approved by the American Medical Assn." This definition comes to us from Paul Schaefer, Executive Secretary of the Arkansas Medical Society, and Dr. Joseph Verser, Secretary of the Arkansas State Medical Board.

Not the Only

Dear Sir:

I have been a reader of BUSINESS WEEK for a number of years, and for a considerable period prior to that time, a number of our executives have been subscribers.

In reading through the magazine I was quite amazed, to say the least, when I came across the article concerning the growing interest in the use of binoculars [BW—Aug. 27 '55, p148] where you made the statement, "Bausch & Lomb is now the only U. S. binocular manufacturer."

. . . Wollensak Optical Co. has been in the photographic and optical equipment business for 56 years, and has for more than 20 years manufactured binoculars . . .

ROBERT E. SPRINGER

TREASURER
WOLLENSAK OPTICAL CO.
ROCHESTER, N. Y.

Creditable Unions

Dear Sir:

The article Credit Unions: Hazards of Growth [BW—Sep. 24 '55, p60] was excellent and should be a tonic to the good people who have contributed so much toward the development of sane and sound credit unions. This article was circulated to each officer, committee member, and employee of our credit union.

To place all credit unions in the



You can't get stuck with an "ugly duckling" purchase when you buy Sylvania money-back fluorescents!

So an egg is an egg?

Maybe on the outside, sure. But wait 'til hatching-out time. That's when you really know what you've got.

Buying fluorescent lamps used to be an only-time-will-tell affair, too. You know, even a lighting expert can't accurately chart the life of a new lamp just by looking at it. You can't tell which are the "ugly ducklings" that'll blacken at the ends and burn out young, and which are the bright beauties that'll keep on giving their all, year after year.

Now Sylvania has changed all that. Here's our proposition, and it holds whether you buy ten lamps or ten thousand:

We'll buy back, at the price you paid, any Sylvania fluorescent lamps that do not, in your opinion, outperform any other fluorescent lamps you're using on the basis of uniformity of performance and appearance, maintained brightness, and life.

This lets you be the judge. Order Sylvania fluorescents, with the "money-back" certificate, from your Sylvania supplier today.

How can we do it? That's easy. We know how good Sylvania fluorescent lamps are. We prove them against other brands, burning them night and day in a year-in, year-out light test. And we're constantly working on improvements to keep Sylvania fluorescents ahead of competition. We're taking no chances—and neither are you, when you buy from Sylvania.

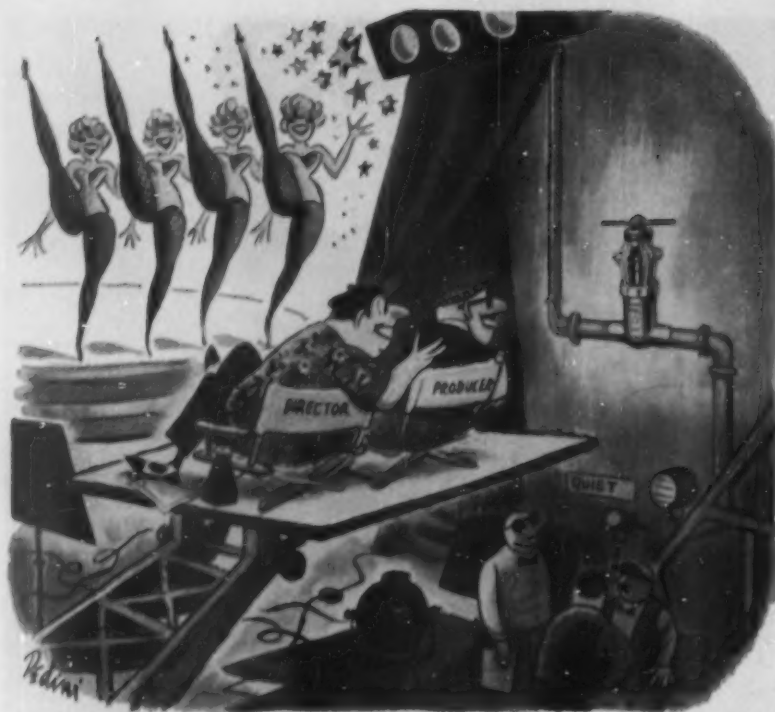
SYLVANIA ELECTRIC PRODUCTS INC.
SALEM, MASS.

In Canada: Sylvania Electric (Canada) Ltd.
University Tower Building, Montreal

SYLVANIA



Your money will be refunded if, in your opinion, they don't outperform the lamps you're now using, as stated above.



"You see Powell Valves everywhere! Engineers have ...

... three good reasons for specifying Powell Valves. They're dependable ... economical ... and engineers know Powell has the COMPLETE quality line of valves."

When you think of valves always think of Powell...

FOR POWELL VALVES can supply just the valve you need. Powell probably makes more kinds of valves and has solved more valve problems than any other organization in the world.

Available through distributors in principal cities. Made in $\frac{1}{4}$ " to 30" and for 125 pounds to 2500 pounds W.S.P. Bronze, iron, steel and corrosion resistant metals and alloys. On problems, write direct to The Wm. Powell Company, Cincinnati 22, Ohio.



THE COMPLETE QUALITY LINE

Powell Valves

109th YEAR

same category as the Ford Rouge Employees Credit Union would be like trying to mix apples and oranges and trying to come out with only apples.

Our credit union (Federal Charter) has been in operation for over 20 years and is made up of officers and committee members with long-term company service and a sprinkling of neophytes to carry on when the oldsters are forced out at age 65. To attempt to change the methods of operating credit unions, which for years have contributed to their members' provident and productive needs, would be inviting the loan sharks to take over, unless banking regulations are amended to carry on in a credit union fashion.

It is difficult for us Southerners to understand why the federal examiners up North were so lenient to permit such happenings beyond the next audit examination. Down South we are forced to dot our "i's" and cross our "t's" but we love this method.

L. B. AVEGNO

PRESIDENT
NEW ORLEANS BELL TELEPHONE
EMPLOYEES
FEDERAL CREDIT UNION
NEW ORLEANS, LA.

Foaming Vinyl

Dear Sir:

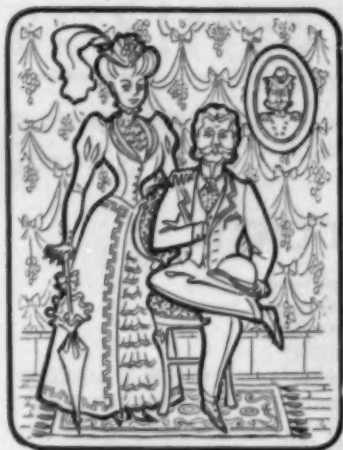
Our attention has been called to the very interesting article Vinyl Plastic Whips Up Foam [BW—Sep. 17 '55, p. 96]. Presumably [you] have been overwhelmed with publicity releases on plastic foams or you would not have lost sight of one of the earliest vinyl foams offered to the trade over three years ago.

"Vynafoam" was developed, and is made and sold by Interchemical Corp., Finishes Division. It is a paste vinyl material that contains a chemical blowing agent and is expanded atmospherically; that is, with heat and air. No special equipment is necessary.

Today it has broad usage for foamed-in-place applications. It may be extruded to form a gasket or even sprayed on irregular surfaces such as an automobile air conditioning unit. After the heat is applied, the material expands and a flexible gasket is formed—or the air conditioning unit is insulated against heat and condensation. . . .

CHESTER M. ROBBINS

DIV. VICE-PRESIDENT
INTERCHEMICAL CORP., FINISHES
DIV.
NEW YORK, N. Y.



A "Sunday suit" for every day



Remember Grandpa and his "Sunday suit?" Worn only on special occasions, it never looked any neater or fresher than your everyday clothes. You can thank the textile industry for giving you "Sunday suits" you can wear all week long.

You can also thank the textile industry for developing man-made miracle fibers... rayon, nylon, Dacron®, Acrilan® and others. Atlas textile chemicals help make *these new fibers* "behave" during knitting, spinning and weaving operations.

The clothes you wear, the food you eat, and dozens of the things you buy for your home or business probably have a touch of Atlas in them. We're moving ahead fast at Atlas. We may be serving you today; if not, we probably will be soon . . . with sorbitol, emulsifiers, detergents, polyester resins and explosives. Atlas Powder Company, Wilmington 99, Delaware.

 **ATLAS**
POWDER COMPANY

SORBITOL, POLYESTER RESINS
EMULSIFIERS, DETERGENTS
EXPLOSIVES, ACTIVATED CARBONS

What's New

IN STEEL FROM STOCK

In the news today are many developments of interest to those who specify, buy or work with steel. Ways in which you can raise efficiency and lower costs in your operations may be suggested by the following summary.

Leaded plates—Now lead has been added to E-Z-Cut plate. As a result, E-Z-Cut, which was already considered one of the best free-machining plates on the market, is better than ever. Tests show that New E-Z-Cut cuts even faster, takes a sounder weld and polishes to a better finish than non-leaded E-Z-Cut. And because sulphur content is much lower, New E-Z-Cut is much cleaner steel, free from sulfide stringers. First stocks include thicknesses up through 3".

Biggest stainless steel plates now available from Ryerson stocks. This is the first time that 96" wide plates in thicknesses up to and including 1"—and heavier plates in 80" widths have been carried in stock at plants from coast to coast. Types on hand: 304, 304L, 316 and 316L. Next time, save welding on your big jobs with these bigger plates.

Delivered prices on tubing—Something new in simplified pricing is featured in a booklet just published by Ryerson. For buyers in the 16 metropolitan areas where large Ryerson tubing stocks are located, the booklet gives total delivered prices. There's no figuring to do—no factors to add. For buyers outside these metropolitan areas, a separate book gives prices per 100 feet and transportation charges. And beside every price in all books is a figure that tells you quickly and clearly when you can get a lower price by ordering just a few feet or pounds more. Copies on request.

Give steel-walled buildings a new look with stainless steel siding in mansard pattern, now available for quick shipment from Ryerson. (Galvanized and carbon steel sheets in mansard pattern also available.) The mansard pattern of widely spaced corrugations makes an unusually attractive wall and loss in total sheet area from pattern formation is slight—only about the same as with 2½" corrugated—previously the most economical pattern you could use. Maintenance-free stainless in mansard pattern also has many industrial and miscellaneous-architectural-ornamental applications. New Bulletin 70-5 on request.

New sizes of leaded alloys—Increasing demand for New Rycut 50, fastest machining .50 carbon alloy steel, has prompted Ryerson to increase the range of sizes in stock. Hot rolled rounds, both annealed and heat treated, are now available in large sizes—up through 9½". So heavy shafting, gears, cams, etc. can be produced at savings possible only with Rycut alloys.

Stainless pipe for welding applications—Now there's no need to wait for mill deliveries or to use expensive stabilized types when you want stainless pipe suitable for welding. Type 304L pipe, an extra low carbon type that eliminates the need for stress relieving after welding, has recently been added to Ryerson stocks. Size range: Schedule 40 welded pipe in commonly used sizes from ¼" through 2". Schedule 40 seamless in 3", 4" and 6" pipe sizes.

Supply situation on bars, structurals, plates and sheets—Heavy demand makes it difficult to keep all sizes of these products always on hand. However, we do have thousands of tons of steel ready for quick shipment and, since our stocks are being replenished continually, sizes that are not available today may be on hand tomorrow. So call us next time you need steel.



JOSEPH T. RYERSON & SON, INC. PLANTS: NEW YORK • BOSTON • PHILADELPHIA • CLEVELAND
CHARLOTTE • CINCINNATI • DETROIT • PITTSBURGH • BUFFALO • CHICAGO
MILWAUKEE • ST. LOUIS • LOS ANGELES • SAN FRANCISCO • SPOKANE • SEATTLE

BUSINESS OUTLOOK

BUSINESS WEEK
OCT. 22, 1955



Output will run close to capacity—and at a higher rate than in any other year—at least until Christmas.

Political uncertainties and the gyrations of the stock market won't change the shape of the business curve importantly this year.

The Federal Reserve Board's index of industrial production stands at 141—41% above the 1947-49 average and 4 points over its 1953 best. The value of all our production (services as well as goods) has topped a \$390-billion annual rate, \$25-billion above the 1953 peak.

More to the point, there seem to be willing and well-heeled customers for just about everything that's being produced.

Materials and labor now would be holding back the boom quite aside from any hesitancy that has developed since the President's illness.

Manufacturers are employing just about 17-million people. That's close to the best level of 1953. Doubtless it represents "full employment" of qualified workers, or overtime wouldn't be rising as it has.

And, while metal shortages are becoming less of an actual bottleneck, they effectively thwart many plans for higher output now.

Metalworking industries undoubtedly would be a notch or two higher if manpower and materials had permitted.

They've no more than regained their 1953 high. (The Federal Reserve's index pegs them at 171, just where they were at their 1953 peak.)

But their output will go on rising, though perhaps slowly.

They are flooded with orders for the equipment needed in industry's record expansion program. We won't know until next spring if confidence has been shaken enough to slow down the wave of expansion.

Employment in the shaping of metal and its assembly into durable goods still trails 1953; 5.6-million workers now are turning metals into everything from knickknacks to locomotives—about half a million fewer than in 1953 (when military output was a good bit higher).

Doubtless fewer trained workers are available in these lines.

We've lost the oldsters who came out only because of the Korean emergency. And 1954 wasn't the kind of year for training green hands.

Steel right now is being turned out in greater volume than ever before—greater even than the previous record just last spring.

Yet customers not only are hounding the mills for deliveries; they also are begging to have orders placed on the books well into 1956.

This should sustain close-to-capacity output well into the New Year.

Prices probably are headed higher in steel, at least for some of the products where the demand is greatest.

Executives of three major companies already have said that, due to the steadily mounting costs of adding to capacity, there should be a better profit margin to help provide needed funds.

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK
OCT. 22, 1955

And this week Lukens Steel hoisted its list price on carbon plates (though its alloys, clad, and flanged products were unaffected).

—•—

Shipments of copper began to show, even last month, how strenuously producers are trying to make up for ground lost during the strike.

Refiners sent almost 145,000 tons to fabricators in September. This was an agreeable surprise to many in the trade, even though everyone had known that a sharp increase was taking place.

Deliveries in the best pre-strike month were only 133,000 tons—and that's a very high level by past consumption standards.

—•—

Keep an eye out for kickbacks from this week's zinc price rise.

Producers who went along in it did so half-heartedly. And one trade veteran called it "just about the most unpopular rise I ever saw."

There are many angles. Outstanding, from a long-range point of view, is past and potential encroachment by aluminum on zinc's markets. Shorter range, there are worries about how far Uncle Sam's stockpilers will go in following rising metal prices.

Leading zinc producers had told a most important customer, the die casting industry, only a month ago that they hoped the price would remain stable for several months and perhaps well into 1956.

Die casters not only are one of the largest zinc consuming industries; they also pay about 1½¢ a lb. extra for a premium grade.

And it is in this market—catering especially to automobile and appliance makers—that aluminum's competition is felt the most.

Aluminum use in die casting in 1955 is estimated by the American Die Casting Institute at 187,500 tons, against 360,000 tons for zinc.

And growth prospects are good. The institute can see use of zinc rising in five years to 500,000 tons (if prices are right) for a 40% gain; but aluminum is seen heading for 400,000 tons, up a smacking 110%.

Prospects are that both zinc and aluminum will break records this year—zinc with output of 1.1-million tons and aluminum 1½-million. But critics of zinc's price swings wonder if, after its three boosts in seven months, the metal will maintain its gains next year.

—•—

Prices that affect your cost of doing business seemed to be taking a sudden spurt early this week. There were markups on newsprint, fuel oil on the West Coast, and cellophane, as well as on zinc.

Agitation also came into the open for a markup in tire prices as well as for steel products.

—•—

Industry has kept its cash drawer full despite rising costs.

The current assets of all corporations have gone up more than \$10-billion in the last year to cross the \$190-billion mark. Current liabilities, meanwhile, have risen only a little over \$4-billion to \$89.6-billion.

Longfellow
DECAN

I.W. HARPER
BOTTLE



BE THE ONE
WHO GIVES THE

I.W. HARPER

"Longfellow"

An entirely new concept in decanter design, created especially for I. W. Harper by famed designer E. L. DuPre. Uniquely combines grace of line with fine balance for ease of pouring. A fitting showpiece for

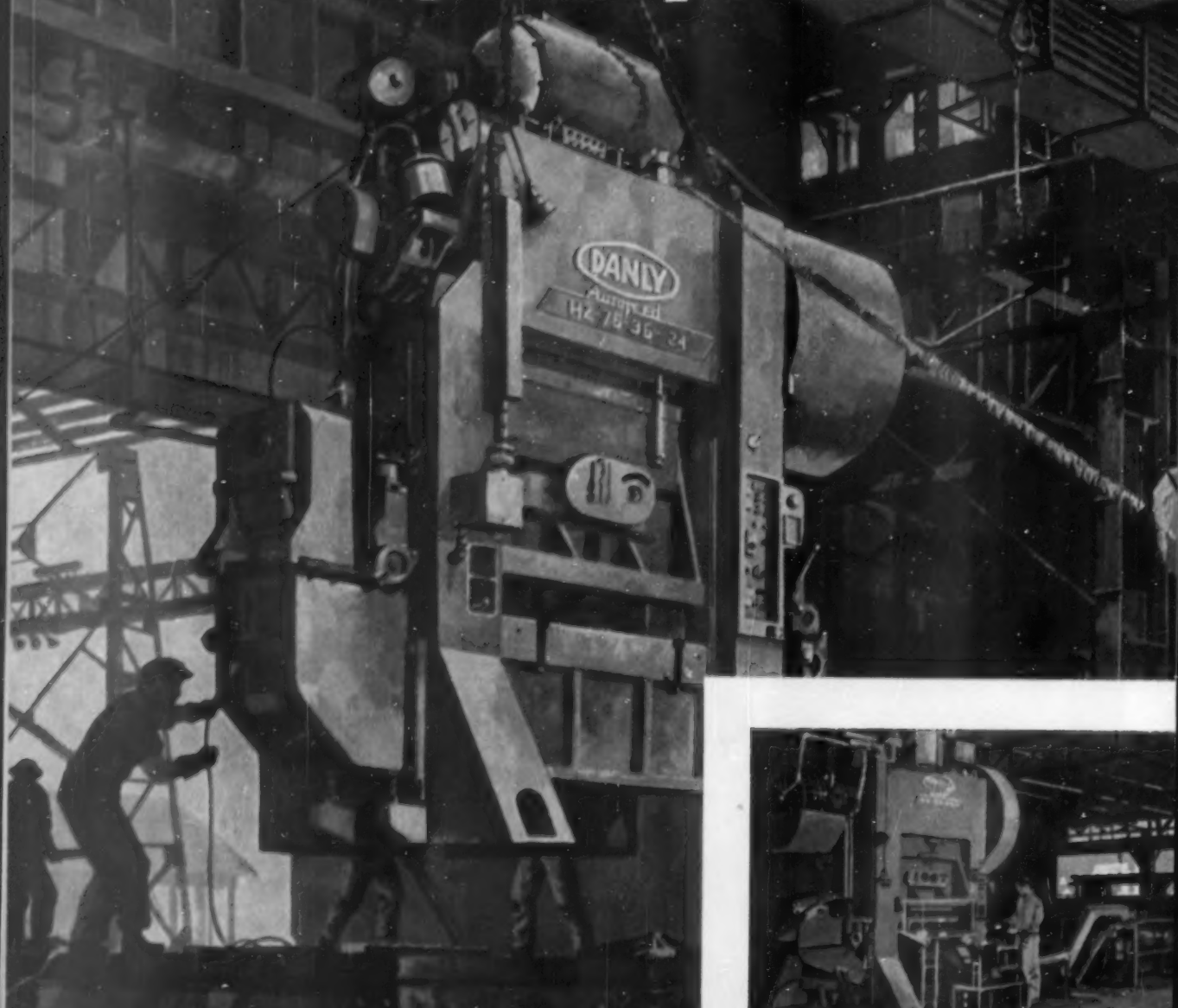
The Gold Medal Whiskey
BOTTLED IN BOND



KENTUCKY STRAIGHT BOURBON
100 PROOF

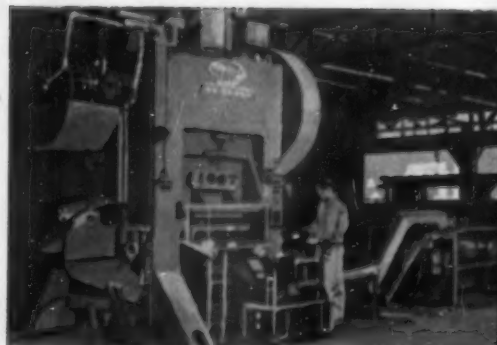
I. W. HARPER DISTILLING COMPANY, LOUISVILLE, KY.

Bold planning and new Danly meeting Industry's needs for lowe



MODERN PRESSES ARE PAYING OFF FOR THE ELECTRICAL EQUIPMENT INDUSTRY

Off the car and on the job... typical of the faster, easier press installation Danly is so famous for... a result of pre-assembly and pre-testing before delivery.



MEETING THE CHALLENGE with modern methods and machines — stamping electrical parts faster, at lower cost!

Wills

Presses are production costs

An important part of today's capital goods expenditure in the electrical equipment industry is ear-marked for Danly Presses

The progress story of today's electrical equipment industry is being told in terms of more efficient, lower cost production. It is being written by leaders in the industry who are turning to newer, more efficient machines to achieve the greatest possible production economies. Modern presses are foremost in their consideration. And more than ever before, they call on Danly to do the job.

Lasting precision performance by Danly, resulting in more stampings per shift, is one of the big reasons why Danly Presses are the big choice in practically every industry. It starts with Danly's extremely accurate yet extra-rugged construction. But Danly goes further, pre-assembles and work-tests every Danly Press at its own plant to eliminate major installation delays. Danly also makes the electrical and pneumatic control system an integral part of the press . . . a method that actually saves weeks of installation time. And Danly employs automatic oil lubrication, reduces press maintenance by hundreds of hours . . . assures positive press protection with a fool-proof lubrication safety system. The results are many: unmatched performance records, months of continuous peak-load operation with no maintenance, less costly down time, fewer rejects. Dollar-wise advantages are unprecedented . . . increased production at much lower cost, increased die life.

You, too, can have these same cost saving advantages that Danly Presses give to so many others. Like them, you'll want complete facts and figures. You can get them by talking with a Danly engineer. Why not phone him soon?

DANLY MACHINE SPECIALTIES, INC.

2100 South Laramie Avenue, Chicago 50, Illinois

Danly's broad line offers all industry the right press to meet every modern mass production need



DANLY UNDERDRIVE PRESSES

Single, double and triple action in a wide range of press tonnages.

DANLY AUTOFEED PRESSES

Industry's No. 1 choice for uninterrupted production, longer die life.

DANLY STRAIGHT SIDE PRESSES

Single and double action, from 50 to 3000 tons . . . right for every tough job.

It costs less to run a Danly Press

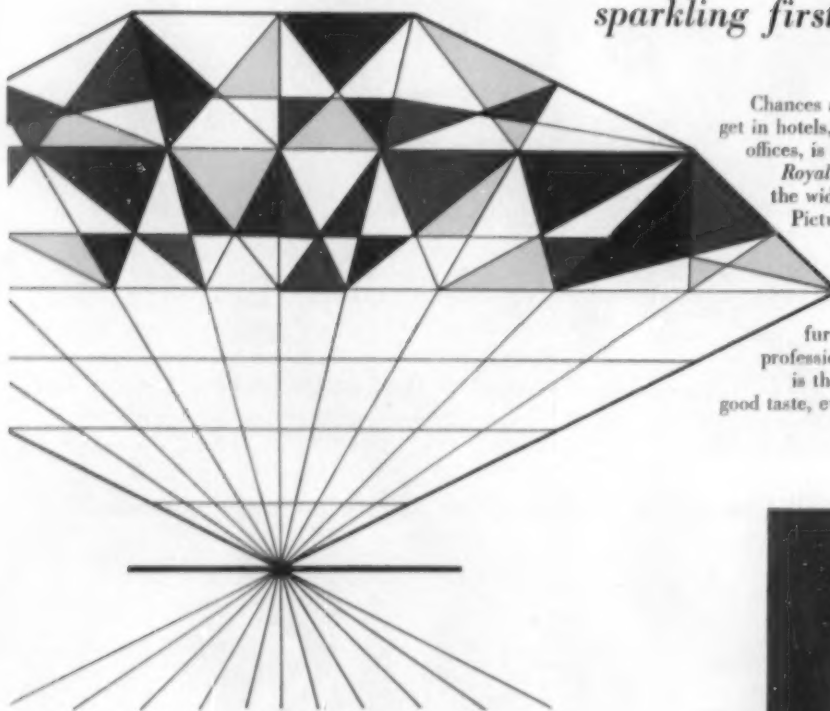
DANLY

MECHANICAL PRESSES

DIE SETS • DIEMAKERS' SUPPLIES



sparkling first impression...



Chances are that bright first impression you get in hotels, shops, business and professional offices, is influenced by beautifully styled, *Royal Professional Furniture*. Note the wide variety supplied by *Royal*. Pictured above are a settee, and a chest of drawers, and below, an example of *Royal* factory seating. In fact . . . *Royal* makes a sparkling array of modern furniture for virtually every business, profession and industry in America—*is the standard of quality and good taste, everywhere.*

professional



furniture

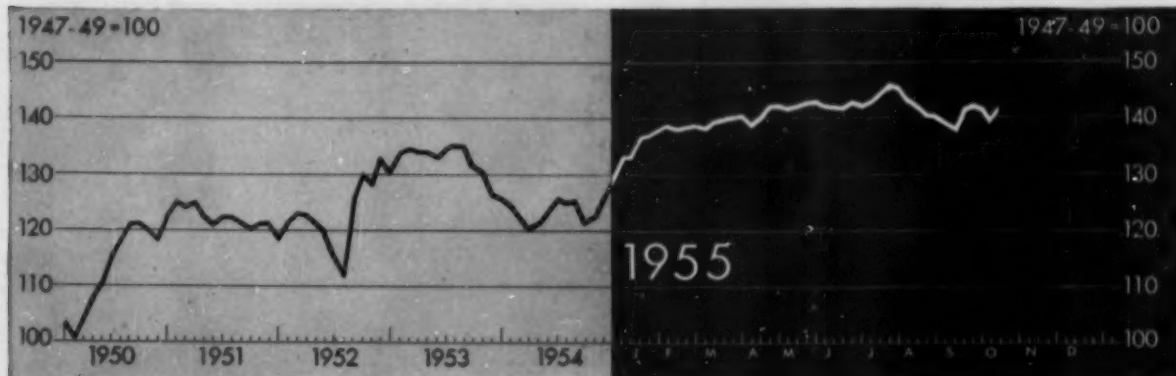
METAL FURNITURE SINCE '07

ROYAL METAL MANUFACTURING COMPANY • 175 N. Michigan Ave. • Chicago 1 • Ill.

Offices and plants from coast to coast



FIGURES OF THE WEEK



Business Week Index (above)

5 Latest Week	Preceding Week	Month Ago	Year Ago	1944 Average
*142.2	†140.0	142.0	121.5	91.6

PRODUCTION

Steel ingot production (thousands of tons).....	2,320	†2,330	2,320	1,769	1,281
Production of automobiles and trucks.....	130,908	†102,079	146,484	59,511	62,880
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands).....	\$62,097	\$62,599	\$66,051	\$42,058	\$17,083
Electric power output (millions of kilowatt-hours).....	10,599	10,639	10,623	9,117	4,238
Crude oil and condensate production (daily av., thousands of bbls.).....	6,714	†6,690	6,684	6,196	4,751
Bituminous coal production (daily average, thousands of tons).....	1,632	†1,603	1,714	1,403	1,745
Paperboard production (tons).....	291,411	289,693	290,350	252,442	167,269

TRADE

Carloadings: manufactures, misc., and L.C.I. (daily av., thousands of cars).....	76	78	74	69	82
Carloadings: raw materials (daily av., thousands of cars).....	58	59	57	48	53
Department store sales (change from same week of preceding year).....	+6%	+15%	+11%	-2%	+30%
Business failures (Dun & Bradstreet, number).....	203	207	191	152	22

PRICES

Spot commodities, daily index (Moody's Dec. 31, 1931 = 100).....	404.7	405.6	409.7	402.6	311.9
Industrial raw materials, daily index (U. S. Dept. of Labor BLS, 1947-49 = 100).....	97.7	97.3	98.2	88.5	††73.2
Foodstuffs, daily index (U. S. Dept. of Labor BLS, 1947-49 = 100).....	79.4	79.2	78.3	92.2	††75.4
Print cloth (spot and nearby, yd.).....	19.5¢	19.5¢	19.0¢	19.0¢	17.5¢
Finished steel, index (U. S. Dept. of Labor BLS, 1947-49 = 100).....	154.5	154.5	153.9	144.7	††76.4
Scrap steel composite (Iron Age, ton).....	\$44.83	\$44.83	\$44.17	\$33.00	\$20.27
Copper (electrolytic, Connecticut Valley, E&MJ, lb.).....	43.245¢	43.363¢	43.965¢	30.000¢	14.045¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.).....	\$2.24	†\$2.15	\$2.16	\$2.42	\$1.97
Cotton, daily price (middling, 14 designated markets, lb.).....	33.03¢	†32.53¢	32.85¢	34.21¢	*\$30.56¢
Wool tops (Boston, lb.).....	\$1.70	\$1.72	\$1.73	\$2.23	\$1.51

FINANCE

90 stocks, price index (Standard & Poor's).....	329.9	†331.2	358.2	253.3	135.7
Medium grade corporate bond yield (Baa issues, Moody's).....	3.59%	3.59%	3.59%	3.46%	3.05%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate).....	21-21½%	21%	21-21½%	14-14½%	3-1½%

BANKING (Millions of dollars)

Demand deposits adjusted, reporting member banks.....	55,618	†55,860	56,110	54,672	††45,820
Total loans and investments, reporting member banks.....	86,102	†84,616	84,735	84,722	††71,916
Commercial and agricultural loans, reporting member banks.....	25,114	†25,010	24,400	21,195	††9,299
U. S. gov't guaranteed obligations held, reporting member banks.....	31,419	†30,282	30,940	37,364	††49,879
Total federal reserve credit outstanding.....	25,714	25,525	25,577	25,963	23,883

MONTHLY FIGURES OF THE WEEK

MONTHLY FIGURES OF THE WEEK		Latest Month	Preceding Month	Year Ago	1946 Average
Housing starts (in thousands).....	September	113.0	123.0	115.7	55.9
Bank debits (in millions).....	September	\$169,001	\$167,365	\$149,898	††\$85,577
Imports (in millions).....	August	\$959	\$885	\$825	\$412

* Preliminary, week ended Oct. 13, 1955.
† Revised.

†† Estimate.
** Two designated markets.

§ Date for "Latest Week" on each series on request.

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New Era Comes Down to Earth

● For foreign ministers' Oct. 27 meeting, the summer's easy optimism about East-West relations is gone.

● So Washington gets set for the long haul in diplomacy to bring the summit's broad understanding down to concrete agreements.

● Old problems—Germany and disarmament—remain; a new problem—the Middle East—grows larger.

This week, Washington is making final preparations for the Oct. 27 meeting of foreign ministers—where the broad understanding established at the Geneva summit meeting in July is to be tested in the discussion of concrete problems.

Those preparations have produced a basic policy decision: to work for the long haul, and count on a gradual improvement in U.S.-Russian relations, rather than anything quick and spectacular, to solve the big East-West differences.

Back of the long-haul approach is this Washington appraisal of where we stand vis a vis Russia:

- No big breakthrough can be expected soon in East-West relations. Soviet behavior since the summit meeting, especially in Germany and the Middle East, proves that.

- But the H-bomb stalemate still pushes both sides to negotiate. Neither wishes to risk a war of annihilation to settle their basic conflicts.

- If negotiated agreements, however limited, can hold fear and suspicion to a minimum, there is some hope that changes inside the Soviet Union will ultimately make a real East-West settlement possible.

This, in brief, is the basis for the approach Secy. of State John Foster Dulles will take at Geneva. It means that the easy optimism of midsummer is gone—and that the over-publicized new era in East-West relations has been brought down to earth.

- **One Hope**—But Dulles still expects agreement at Geneva on one of the three main points of the agenda—greater freedom of East-West communication. This would pave the way to further meetings at the foreign ministers' level, even if nothing is

achieved on the other two agenda items—disarmament, and German unification within a European security system.

Pres. Eisenhower's special assistant, Harold Stassen, who will join the conference for the disarmament discussion, is more hopeful. He thinks there's a chance that, to make a dramatic gesture, Russia will agree to Pres. Eisenhower's aerial inspection plan. That, of course, would put real life back into the "Geneva spirit." But it wouldn't substantially change the diplomatic time schedule Washington is working on.

You can tick off the main positions the U.S., Britain, and France will take at Geneva in fairly short order. Each is designed to bring pressure on the Russians to come to an early agreement or, failing that, to give the West maximum advantage for the long haul.

I. Welding Germany

On Germany, the Western foreign ministers will again push the case for a unified Germany, free to decide whether it wants to stay in NATO. And to allay Soviet fears of a rearmament Germany, they will offer a European security pact that would (1) guarantee the Soviet bloc nations against a German attack; (2) provide for a thinning out of troops on both sides of the Iron Curtain, under a system of mutual control and inspection. On top of that, the West apparently is prepared to guarantee the limitation of a reunited Germany's army to 12 divisions—perhaps even less.

No one in Washington expects the Russians to accept this Western proposal. But that doesn't mean the West won't score diplomatically on the German question.

It will be perfectly plain after Geneva that Moscow's expressed fears of Ger-

man militarism are strictly phony, that its aim, just as it was in Stalin's day, is to get control of all Germany.

- **German Temptation**—The big question is whether the West Germans will hold out against the Soviet game. Western diplomats don't discount the dangers. For one thing, a large part of the West German population, especially the youth, still is not sold on German rearmament.

Then, the Russians can offer tempting economic bait. When Chancellor Adenauer was in Moscow, both Bulganin and Khrushchev told the German delegation of the economic opportunities available for the asking in Communist China. The industrialization of China, the Soviet leaders said, was too big a job for them to tackle alone.

But Washington still thinks that, barring a big economic slump in the West, West Germany will resist these blandishments. In that case, so the thinking goes, Moscow eventually will back down, as it did in Austria.

II. Controlling the Bomb

On disarmament, the U.S. will rest on Eisenhower's summit conference proposal for aerial inspection. Last week, the President tried to meet Soviet objections to the proposal by saying, in a letter to Bulganin, that the U.S. would agree to Soviet suggestions that seaports and airfields be added to the system of mutual inspection.

Washington isn't pushing the Eisenhower scheme merely as a step toward complete nuclear control. In its own right, if put into effect, it would provide immediate substantial protection against surprise attacks, make U.S. airbases abroad far less vulnerable to sneak raids.

- **Showing the World**—Thanks to the President's initiative in July, the West has a strong position in the disarmament field. The world knows that the U.S. is ready to negotiate, and to meet the Russians halfway on any plans that seem likely to reduce the danger of nuclear war.

Moscow, meanwhile, is on notice that the U.S. will take no chances with the nuclear stalemate. Air Force Secy. Donald A. Quarles put the position bluntly in a recent speech that was heard by the Soviet's military attaches. What we are after, he said, is

"a balance between our air power and any opponent's temptation to aggression." As long as the U.S. maintains the ability to meet aggression with crushing force, Quarles added, it will have a "convincing deterrent to war."

III. A Thinner Curtain

On East-West contacts the U.S. may come up with some surprises at Geneva. They are most likely to come in the fields of travel and communication. Nothing much is likely to happen on trade.

A U.S. proposal to open up air travel between the U.S. and Russia seems to be in the cards. Pan American Airways' Pres. Juan Trippe pushed the door ajar this week by proposing that Aeroflot, the Soviet airline, join the International Air Transport Assn.

• **Who Gains by Contact?**—U.S. officials are far from unanimous about permitting more East-West contacts. But Eisenhower pretty well committed the U.S. to such a course at the summit meeting.

There is also the feeling that the U.S. stands to gain in the long run from having as many Russians as possible see what creates this country's abundance, and from having the Russian people see Americans in their midst. The mass enthusiasm aroused in Lenin-grad by a visit from the British fleet hasn't escaped notice in Washington. If fundamental social and political changes are afoot in post-Stalin Russia, as all the evidence suggests, contacts with the West can only encourage the trend.

IV. The Ominous Shadow

Looming in the background at Geneva, there's one important subject not on the foreign ministers' agenda. It's the Middle East—in particular, the Soviet efforts to move in on what traditionally has been a Western sphere of influence by offering arms and economic aid to Egypt.

• **Cautious Strategy**—Even here, the long haul principle seems likely to prevail. Washington doesn't intend to outbid Moscow with economic aid for Egypt. Apparently the plan is to let the Egyptians dicker with Moscow over an offer the Russians have made to build a \$600-million dam on the Nile. The feeling is that the Russians won't be able to deliver on this kind of project. They have failed to come through in Afghanistan, after offering that country economic aid on a much smaller scale.

As for the Czech sale of arms to Cairo, the U.S. and Britain will keep track of every piece of equipment that crosses the Mediterranean, and see that the military balance between Egypt and Israel is not upset.



FLOOD and wreck that disrupted freight and passenger services were just another . . .

Blow to the New Haven

To the New York, New Haven & Hartford RR, the heavy floods in New England last weekend had almost the weight of the straw that broke the camel's back.

The toll of the latest floods—42 dead or missing and estimated damages of \$50-million—was a rough blow to Connecticut and other Northeastern states still digging out from the havoc wrought by Hurricane Diane in August (BW—Aug. 27 '55, p. 26). But although some towns, notably Winsted, Conn., got their second inundation in as many months, other sections bore the brunt of the second deluge. And as the waters receded, many New Englanders heaved sighs of relief that the damage—considerably less than Diane's \$500-million tantrum—wasn't worse.

• **Acts of God**—For the beleaguered railroad, however, there was little to be Pollyanna about. For one thing, the storm broke the line's main artery, which carries about 85% of its total business. "Looks like somebody upstairs just doesn't like Pat McGinnis," one Wall Street wag cracked.

At any rate, since McGinnis took over the New Haven after a bitter proxy fight last year (BW—Apr. 24 '54, p. 33), the road has been hit by no less than five "acts of God"—three hurricanes and two floods. These have been compounded by a couple of terrestrial troubles like wrecks.

• **Soggy Credit**—In the face of this latest misfortune, New Haven's commuters—usually a vocal and querulous group—have shown a friendly forbearance with disrupted schedules and uncertain

travel. Where the road goes from here, however, depends not so much on the reactions of passengers and shippers as on those of its bankers and investors. The latest flood has the management more worried about its credit than about its rolling stock.

The McGinnis group has been ambitious for its road, and its plans have included a new lightweight train for better passenger service (BW—Apr. 2 '55, p. 25), large-scale replacement of aged freight cars. But cash for the projected improvement would have had to be borrowed, since the New Haven has little money to play with and a high debt structure—the main reason for McGinnis' obsession with credit.

• **Disaster's Price**—Now the company will have to borrow substantial sums—not to spend to make money with—but just to make immediate repairs.

Two hurricanes last year cost the New Haven \$630,000, plus an estimated loss of over \$2-million in potential revenue. Diane beggared that. With 38 bridges destroyed, and 70 miles of track to be rebuilt, the estimated repair bill came to \$10.5-million. The latest flood—five bridges destroyed, other major damage—adds at least \$1-million to that. Resulting revenue loss hasn't been estimated.

The New Haven's immediate problem is where to get the money to make the repairs. It already has borrowed \$2.5-million in short-term money to get the road working again with temporary repairs, and the latest deluge may have wiped out a good part of that.

• **Snags**—The road has preliminary arrangements with a group of banks headed by the Chase Manhattan Bank to borrow \$10.5-million, but that must first be approved by the Interstate Commerce Commission and by both common and preferred shareholders. Here's where the snag comes.

Frederic C. Dumaine, Jr., whom McGinnis ousted from the presidency of the road last year, still controls almost a third of the preferred—enough to block approval of the loan. Wall Street rumors say that his price for approval is a rider specifying that no common stock dividends shall be paid for 10 years.

As a result of the two floods, some money lenders seem to be backing away from more long-term financing for the New Haven. According to a spokesman for one large insurance company, "There's no question but that McGinnis has been doing a good job with what he's got. But we figure the floods are going to be the straw that breaks his back. In the first place, there's the pure and simple extra costs of repairing damages over which he had no control. But because of the trouble, a lot of shippers have gone to trucks, and probably will stay with them just to avoid future things like this. The New Haven's most lucrative passenger business is the New York-Boston run. With the Connecticut Thruway opening soon, buses will be able to make the run in a comfortable four hours, at a lower cost. That will leave the road with just short-haul commuter business, which doesn't pay its own way."

• **Record**—Meanwhile, the road is still in business. Earnings for the first eight months this year were about triple those of the same period last year. Windfall business from a truck strike kept August revenues even with the year before in spite of Diane. In September, McGinnis says, carloadings were up 11% and the road made a net profit (before sinking fund requirements) of almost \$1-million—in spite of disrupted service and emergency repairs. These figures don't include losses from Diane, which will be capitalized. September, McGinnis says, was a "normal" month; October may not be quite so good.

If McGinnis can get his money, however, the road will still be in fairly good shape for the short haul. Freight and passenger lines were on almost normal schedules by the week's end, though trains were rolling over wooden trestles rather than concrete and steel bridges. With flood losses capitalized, operating income for the year could still run close to the same pace as in the eight-month period. If revenues can be maintained at earlier levels, McGinnis may still defeat the glum predictions.

Interest Rates Go Up a Notch

Latest boost in prime rate catches the Federal Reserve by surprise. Cause of the rise: not enough new lendable funds to meet seasonal demand.

All over the country this week, bankers and financial men were asking one another the same question: Did the Federal Reserve's usually expert handling of the money market simply blow a fuse? Or is the Fed following some devious line of reasoning too deep for any outsider to fathom?

This somewhat bewildered attempt to psychoanalyze the Fed started when the big commercial banks announced an increase in their prime rate (the interest rate they charge their biggest and best borrowers) from 3½% to 4%. Since all rates scale upward from the prime, this means rates are now even higher than they were in the tight-money days of 1953—the highest they have been in 25 years. And borrowers can testify that money is almost as hard to get as it was in 1953.

• **Why It Happened**—The banks boosted their prime rate because the steady upswing in the demand for credit was exhausting their lendable funds.

The Federal Reserve had been feeding a little additional money into the market by purchasing Treasury bills. But this extra wasn't anywhere enough to take care of the seasonal rise in the demand for loans that always comes toward the end of the year. The only way the banks could adjust to the situation was to put their rates another notch upward—so that borrowing would be discouraged by the higher rates.

• **Baffling**—At midweek the Fed was saying nothing officially—following the old central bankers' rule of "keep 'em guessing." But in this case, Wall Street suspected that the Fed was keeping itself guessing, too. For the Fed quite plainly didn't want rates to go up this week and hadn't expected them to.

From spring to early fall, the money managers in Washington followed a more and more restrictive credit policy, trying to keep the business boom from turning into an outright inflation. But Pres. Eisenhower's heart attack and the resultant note of caution in business planning (BW—Oct. 1'55, p27) added some extra factors to the calculations. As the threat of inflation receded, the Fed quietly let it be known that it didn't intend to tighten up any more. Wall Street, agreeing that this attitude fitted with the logic of the situation, waited for monetary policy to shift to neutral.

Now, Wall Street doesn't quite know what to think. The rise in the prime

rate apparently took the Fed by surprise. But it shouldn't have. As one banker put it: "We follow rather than lead the Fed. We were acting in response to its restrictive policy. They have acted as if nothing happened on Sept. 24."

• **Too Cautious?**—The best guess in bank offices is simply that the money managers were napping. Evidently, they underestimated the pressure on the market and moved too cautiously in feeding extra credit into the market to take care of the seasonal needs. In their effort to avoid a dramatic reversal of policy, they failed to make any change in policy at all.

The Fed is now saying that the commercial banks were making a belated response to its past policy. It claims that the new prime rate is in line with the discount rate (the rate at which the Federal Reserve Banks stand ready to lend to members). And it insists it doesn't want money rates to go any higher than they are at the moment. To emphasize this, officials point out that they didn't raise the discount rate after this latest rise in the prime rate.

• **Repercussions**—But it's not so simple as that. The market now is confused and doubtful. The whole interest rate structure is under pressure. The Treasury bill rate went up to 2.33%, well above the discount rate. Commercial paper dealers were forced to raise their yields on four- to six-month paper to 2½%, the 10th rise this year. Federal funds—temporary loans between banks—were quoted at 2½%, and weren't freely available at that. Although this squeeze seemed to be easing up a little at midweek, the market was still tight and still confused.

The higher rates undoubtedly will bring some slackening in demand for money. That in itself will take a little of the pressure off. But old-timers in the money market say the Fed has missed its chance to make a cautious, inconspicuous shift to a neutral policy. Now it will have to do something positive and dramatic—and public—if it wants to convince the market it really means to keep rates from going up.

"People at the Fed may have thought they could hold rates steady without a real shift," said a banker. "But they didn't realize the strength of their own restrictive policies. Now they have been put on notice that rates cannot be stabilized just by sitting on their hands."

On Capitol Hill, the quiet of recess was broken this week as that shadowy word "automation" echoed in committee rooms. But though experts testify, there is more noise than light as . . .

Congress



THEORISTS Diebold (left) and Buckingham, young prophets of automation, showed at hearings they are as divided as labor and management on automation's impact.

PIONEER in the practice of automation, Ford's D. J. Davis, reported Ford's experience: a 14% increase in man-hours during four years of automation's growth.



Congress this week got down to its first full-dress inquiry into the facts that lie behind the word that sets some trembling, others beaming—"automation."

The TV lights and flashbulbs were flaring in the corridor outside the old Supreme Court room on Capitol Hill when the economic stabilization subcommittee of the Joint Committee on the Economic Report set the probe going. The subcommittee's mandate: to consider what, if anything, the government should do to prepare for widespread automation.

That the widening range of automation is one of the hottest economic questions of the day is already plain (BW-Oct 1 '55, p74).

In Washington this week, it was easy to gauge, too, that automation is a vast question for industry. Word got around that General Electric Pres. Ralph J. Cordiner has had a task force of 40 people working for many weeks preparing the testimony he's scheduled to give the subcommittee next week. It also was clear that labor reckons the question no smaller. CIO Pres. Walter P. Reuther's prepared testimony showed that the organization had gone to great pains in its research.

I. No Time for Politics

But by the time the first few subcommittee sessions were over it was apparent that automation is not likely to have much impact on legislation in the near future. There were two tip-offs on that.

• **Absent Members**—First tip-off was that Chmn. Wright Patman (D-Tex.) was the only subcommittee member present during the first four sessions. The others sent messages that they were unavoidably detained elsewhere. Their absence was a sign that neither Democrats nor Republicans consider automation is politically significant right now.

The second tip-off came from the witnesses themselves, particularly from two young prophets of automation—John Diebold, 28, New York management consultant and author of a popular book on automation; and Walter S. Buckingham, Jr., 30, associate professor of industrial management at Georgia Institute of Technology.

• **Split in Ranks**—What they had to say showed that the ranks of the theorists are just as divided on the ques-

Delves Into Automation

tion of what automation's full impact will be as are labor and management.

Diebold and Buckingham were the first to appear at the witness' microphone. Diebold's position is slightly right of center, close to the National Assn. of Manufacturers' view that there's nothing revolutionary or awesome about automation. Buckingham is slightly left of center on this issue; he favors labor's position that automation puts the country on the threshold of revolutionary changes.

What they told the subcommittee did not differ much from what they said at the CIO conference on automation last spring (BW-Apr.23'55,p136). But they did re-emphasize the need for bringing more facts about automation out into the open so that intelligent planning can follow.

• **Detroit Experience**—After them, Ford's representative, D. J. Davis, manufacturing vice-president, took over the microphone.

Davis saw nothing alarming about the spread of automation in the auto industry. To prove his point he said that non-defense employment has in-

creased—not decreased—at Ford during the last few years while automation allegedly has been making great headway. In 1954, total man-hours worked were 14% more than in 1950—an increase greater than the increase in unit production.

II. Key to the Question

Then came the explosive red-head from Detroit, Walter Reuther. He drew a bead first on Davis' testimony.

The only reason that the introduction of automation did not cause unemployment at Ford, said Reuther, was that it came at a time when Ford was expanding production.

In a dynamic economy, automation has not created unemployment at Ford, Reuther agrees. But he holds that in a static economy it would bring unemployment.

This brought the subcommittee to a key point. Right here you might have expected that this vital question would have been asked: "Will automation be applied except in time of an expanding highly competitive economy?"

• **Silence Continues**—But nobody asked it. Still, the significance of the rest of the subcommittee's work may rest upon it getting an answer to this.

Instead, with the question unasked, Reuther went on to make it clear that for labor automation will be a rallying cry in the drive for a \$1.25 minimum wage, retirement at 60, a four-day 32-hour week, industry-financed retraining programs, and government-sponsored scholarships for all youngsters with ability to learn.

Taking time to range around the subject, Reuther urged that the subcommittee remain in continuous operation to act as a clearinghouse on automation. Information, he said, is vital to planning and planning is vital to the future. To make his point here, Reuther compared today's economy to a supersonic jet, 1929's economy to a "Model T." Since the economy is moving so much more rapidly it requires much more advance planning. At 20 mph. in a "Model T" the smash-up was bad, he argued, but at 600 mph. in a supersonic jet economy a smashup could be catastrophic.

BUT FROM LABOR'S Walter Reuther comes the hint that automation will be rallying cry for a series of big demands.



U.S. International Airlines Grow Into



Now They're Lining Up for Jet

The jet age moved dramatically closer to the airways last week. Pan American World Airways ordered 45 jet airliners that will be able to whisk 104 to 131 passengers 5,000 miles nonstop, at a cruising speed of 575 miles per hour. Total price for airplanes and spare parts: a record \$269-million.

And this week an advance herald of the jet age, the prototype Boeing 707 jet airliner, crossed the continent from Seattle to Andrews Air Force Base in Maryland in 3 hr. 58 min.—setting an unofficial record for transcontinental transport aircraft. The 707 flew the 2,340 miles at an average speed of 592 miles an hour. It now has had more than 300 hours in the air.

• **Scramble**—With the log jam broken by Pan American's order, you can look for a scramble among airlines that have been waiting for the other fellow to take the plunge. Among the domestic carriers, the trade expects United Air Lines to announce its plans next week. National Airlines has already made known its intention to acquire six Douglas

DC-8 jets; and Eddie Rickenbacker's Eastern Air Lines has jets on the later stages of its expansion program.

Industry report has it that American Airlines is set to order jets for its New York-Los Angeles run. The trade also has its eye on Trans World Airlines (though a TWA official recently insisted, "We're still thinking").

Among foreign operators, Air France is "definitely in the market for new equipment, though not necessarily U.S.-built," a spokesman says. Five of its top brass are attending this week's annual meeting of the International Air Transport Assn. in New York, with visits scheduled later to Lockheed, Boeing, and Douglas plants on the West Coast. KLM-Royal Dutch Airlines recently had three officials in Seattle to fly the 707.

• **Gordian Knot**—Pan American solved the airline quandary (BW-Sep. 3 '55, p98) by splitting its order between Boeing and Douglas, with all 20 of the 707s due for delivery before the first of 25 Douglas DC-8s arrives late in 1959.

The 707s will carry 104 passengers first class, or 125 tourist. They will be powered by four "advanced type" Pratt & Whitney J-57 turbojet engines, rated at more than 10,000 lb. thrust each, and located in pods under the swept-back wings. First deliveries will be in December, 1958.

The Douglas DC-8s will carry 108 first-class passengers, or 131 tourists. Pan American will get the last DC-8 in January, 1961. The airline says the DC-8s will have a larger Pratt & Whitney engine, a slightly greater range. The industry guesses this means the J-75 engine, still on the drawing boards.

• **Costs**—No per-plane price tag has been announced. But the \$160-million Pan American is paying for 25 DC-8s, including spare parts, works out to \$6.4-million per plane. If the line is ordering the same number of spare parts for the 707s as for the DC-8s, the Douglas planes will cost some \$950,000 more each than the Boeings.

The bigger and costlier engine, longer range, and greater seating capacity ac-

the Jet Age



Take-Off

count for the difference (Boeing officials are quick to point out that slight alterations in the 707 will accommodate the new engine when it's ready, thus stepping up performance).

The cost of the jets is up sharply from present piston-driven propeller craft. A Pan American spokesman puts the approximate price for the extensively used DC-6B at \$1.2-million, for the DC-7B (just getting into operation) at around \$2-million, for the DC-7C (Pan Am has 33 on order) at approximately \$2.3-million.

• **Savings**—But Pan American and the two builders count on more than offsetting the high initial outlay through operational economies. A New York to London jet will take 6 hr. 35 min. non-stop. That means only a single crew rather than a double one. It means faster turnaround, greater utilization (the airline figures its jets will make three flights for every two by today's propeller-driven craft).

The load factor also favors the jets. The 707's first-class capacity of 104

compares with 52 passengers in Pan American's DC-6Bs, 54 in the DC-7Bs, 56 for the DC-7C. Lockheed Super Constellations can take 67 first class.

All this means fewer planes. Says Ralph L. Bell, Boeing director of sales: "Nine 707s will provide the same seat miles as 25 DC-7s, and the ground operating facility requirement . . . reduces direct operating costs materially."

• **Holdoffs**—But not everyone was ready last week to hop right on the jet bandwagon. Sir Hudson Fysh, head of Qantas Empire Airways (also in for the IATA meetings), said Qantas would be flying jets along with other main airlines "in the fullness of time." He added: "There will be no stampede."

An official of another company said: "When you start buying a fleet of jet aircraft for \$6-million a plane, one mistake and you're finished. We have to move pretty carefully."

• **Comets and Turboprops**—You can't count British Overseas Airways Corp. out of the jet picture either, with 19 de Havilland Comets (Mark IV) ordered for regular flights, one Mark II for training purposes. The Mark IVs will be flying about the time the first Boeing 707 gets in service. But they

will be smaller, will take 9½ hr. from London to New York, with one stop.

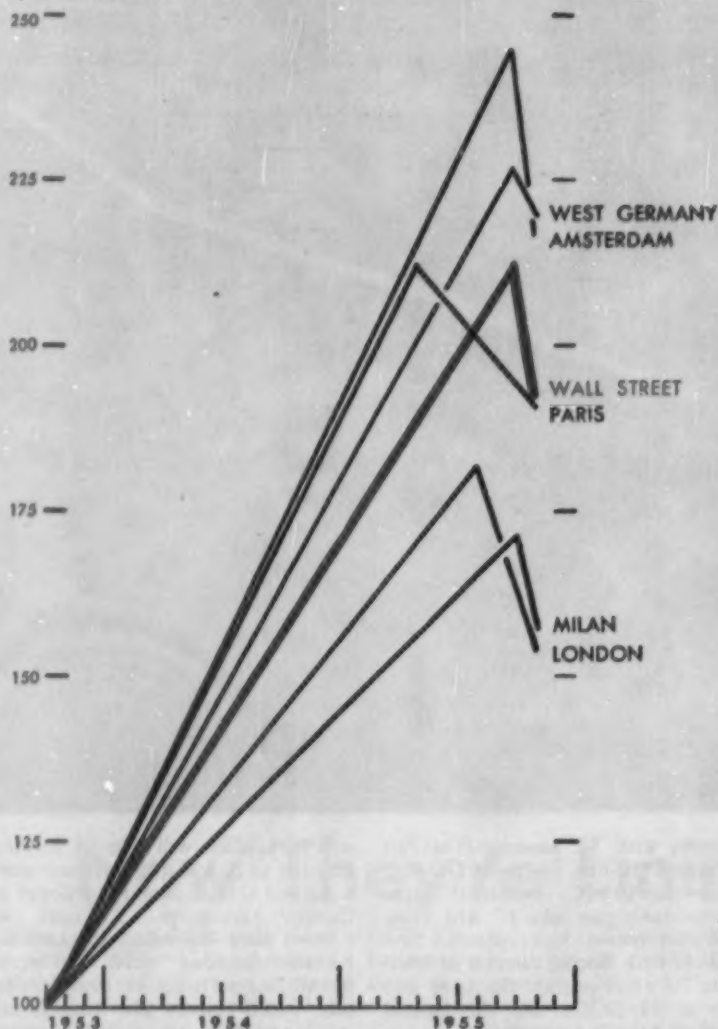
Several airlines are buying slower but cheaper turboprops. American and Eastern have big orders for Lockheed Electras (cruising speed 400 mph.). BOAC has on order 33 Bristol Britannias, which can fly the Atlantic non-stop. And this week, British European Airways announced it is dickering with Vickers-Armstrongs Ltd. for a fleet of Vickers 900 Vanguards—big brother to the Vickers Viscounts now flying for Capital Airlines in the U. S.

Turboprops, with lower initial costs, are more economical on short hops or multi-stop routes.

• **Facilities**—The problems that come with the jet age may also delay orders for the big, expensive jets. Several companies think it may not be economical to invest huge sums in them until traffic control and ground facilities are improved. The fast-cruising jets, they say, need also better radar and communications equipment. And the jets burn fuel at a prodigious rate. True, they need less because they get there faster; but to circle above an airport in instrument weather they'd need hundreds of pounds of extra fuel.

The World's Bull Markets Stumble

September 1953 = 100



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Making It Unanimous

Wall Street, La Salle Street, and Montgomery Street aren't the only arenas where bull markets are staggering. The London Stock Exchange, Paris Bourse, and other leading securities marts overseas are following the same pattern, and the declines started even earlier in Paris and London (chart).

Industrial stock prices broke deepest in London—down 16% from a peak nowhere near so high as most other exchanges. In the Amsterdam, Paris, and Milan markets, the decline has ranged closer to Wall Street's 10% loss. West German prices held up better.

• **Eisenhower Break**—Part of the world-

wide price weakness stems from the same thing that triggered the break in U.S. markets: the blow dealt to investor confidence by Pres. Eisenhower's heart attack. Investors overseas saw the same unfavorable potentialities as Wall Streeters did.

But the bearish factors started operating in some foreign markets well ahead of the Eisenhower break. In Paris, prices began their retreat from the bull market high as far back as last April. London's bull market tripped at least temporarily in July, and prices in Brussels passed their peak in August.

• **The Scoreboard**—Here's how BUSI-

NESS WEEK reporters abroad analyze the dominating factors in various markets:

LONDON—Price troubles here are traceable chiefly to the uncertainties in Britain's seesaw battle against inflation (BW—Oct. 8 '55, p156). Indeed, many signs suggest that, despite optimism about the long-term earning power of British industry, the current bear market may last another nine months or a year.

PARIS—Prices on the Bourse have lately rallied on symptoms of inflation: growing deficits in the budget, note circulation at an all-time high, weakness in the franc abroad, and the higher wages that industry will soon have to pay.

Still present, though, are the factors that caused last spring's break: the North African crisis and the basic weakness of Premier Faure's right-wing government, with the probability that, if it should fall any time, it would be replaced by a left-wing coalition less friendly to business. Thus, the recent rally is generally considered to rest on rather flimsy grounds.

AMSTERDAM—Here, the price drop was largely due to worries over Eisenhower's illness, results of the Indonesian election (BW—Oct. 15 '55, p172), and the French crisis. However, observers feel that the shakeout has already got rid of much of the speculative froth that had made the market vulnerable. Then, too, the proceeds of liquidation sales are yet to be reinvested, and this buying will bolster prices. No further sharp decline is expected unless world news in general should turn sour.

MILAN—The break here in early October had little or no connection with Pres. Eisenhower's illness. Instead, it was a reaction to the extravagant price levels that many stocks had reached and to repeated false rumors that the government was considering new taxes and stock market controls.

Prices have rallied somewhat. Large purchases of Italian stocks by American investors have heartened Milan traders. So have local oil discoveries, though the stimulus value of these depends somewhat on what kind of law the government adopts to regulate oil prospecting.

• **Confidence in U.S.**—Foreign opinion on the trend of the U.S. economy is generally favorable. In the immediate outlook for American shares, however, the Dutch and British are a bit bearish. They aren't sure our stock prices have hit bottom, especially if Eisenhower decides not to run again.

Reports indicate some rather substantial selling of American shares lately by foreign holders, particularly the Dutch. The Dutch say they have in many cases reinvested the proceeds in "home" securities.

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a timely piece by Mr. Friendly



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BUSINESS BRIEFS

The happily whirling wheels of the nation's economy are singing various songs of prosperity:

Gross national product during the third quarter hit a record annual rate of \$392-billion, according to preliminary estimates by the President's Council of Economic Advisers. That's \$7-billion above the seasonally adjusted high recorded in the second quarter.

Industrial production in September set a record for the month. The Federal Reserve Board says production ran at 141% of the 1947-1949 average.

Pre-tax corporate profits in the second quarter reached a seasonally adjusted annual rate of \$43-billion, says the Commerce Dept. That's the fourth highest quarter on record, and the best since first-quarter 1951.

Farm realty values as of July 1 had climbed back up to the Korean War peak, the Agriculture Dept. reports. In the previous four months, farm values had risen 3%, finally achieving an average value per acre that was 125% of the 1947-1949 base.

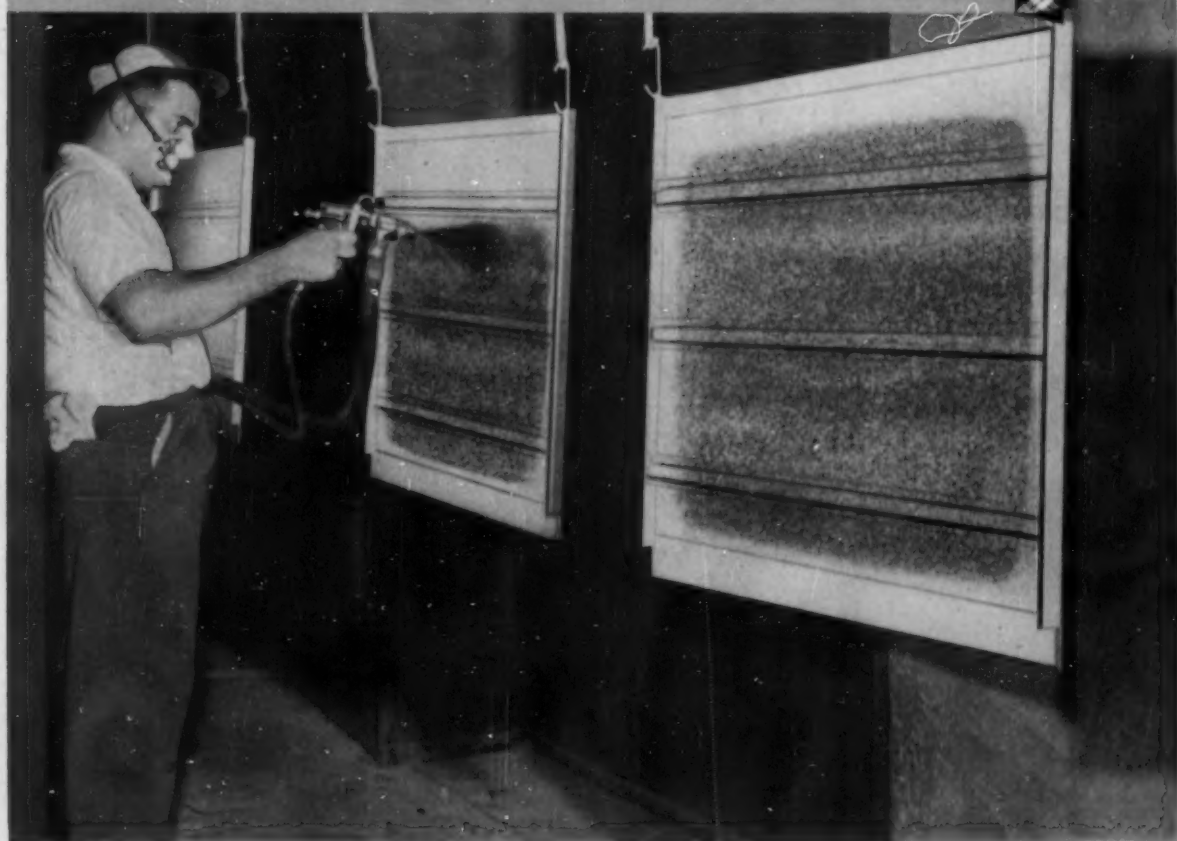
Railroad expansion plans were being pushed this week in the wake of the Interstate Commerce Commission's decision to make permanent the 1952 freight rate boosts of 12% to 15%. The hike had been scheduled to die at yearend, which would have cost the roads an estimated \$900-million in revenue in 1956. One note of sorrow amid the joy: Coal producers said it would cost them \$100-million a year.

Higher—and wider—learning: The University of Michigan is aiming at a \$111-million-plus building and remodeling program in the next five years.

No change: The 1954 income of the average income-earning American was \$2,300, the same as in 1953, says the Commerce Dept. The department breaks the 1954 figures down into \$3,200 for men and \$1,200 for women.

The flow-of-funds system of national accounts was unveiled this week by the Federal Reserve Board. Pioneer development of the system was done by Prof. Morris A. Copeland, now of Cornell (BW-Jan. 10 '53, p144). From now on, flow-of-funds statistics will play a regular part in the data the government compiles to depict the economy.

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WASHINGTON OUTLOOK

WASHINGTON
BUREAU
OCT. 22, 1953

A BUSINESS WEEK

SERVICE

The January session of Congress, now only 10 weeks off, will set the stage for the 1956 election, when the White House will be at stake, along with control of the House and Senate. Business-making legislation is ahead. Both parties are busy, deciding now on positions for next year. The Administration's will show in the January State of the Union and budget messages; the Democrats' in bills backed in House and Senate. You can anticipate what the major issues will be without waiting on Congress.

Taxes will be cut. That's an odds-on bet. The Democrats are collecting ideas now on business effects of existing law. Eisenhower advisers talk of delaying budget balancing, as a "stimulant."

Defense spending will stay high. Both parties like big defense.

Farm income will get a booster shot. The uncertainty is over "how."

Social Security will be liberalized—more money for the retired.

Public works will stay on the rise. Both parties advocate more for highways, schools, hospitals. Big differences are on financing, not amounts.

Here is the business fact to keep in mind: The "running records" for 1956 will be written in Congress next year. The proposals put before Congress by the parties will be the dominating political consideration—the what-we-tried-to-get-for-you record. Actual achievements will count, too. And mixed through it all, perhaps dominating the struggle, will be the outlook for peace and the business situation as next fall nears.

Some details on the big issues can also be anticipated.

Individuals will have priority on tax cuts. That's considered to be good politics—it plays to the voters and also stimulates consumer buying. The Administration will lean to a downward revision of income rates—spread the benefits. Democrats will go for higher personal exemptions, which tend to concentrate relief in the lower income brackets.

Excise tax reductions will come second.

Cuts in the corporation rate will be last and will depend largely on how much loss of revenue Congress feels the budget can afford.

A tax date to remember: Unless Congress acts before next Apr. 1, there will be automatic excise reductions—on tobacco, liquor, autos. And it will take legislation to prevent an automatic drop in the rates paid on corporation income. As the law stands, the corporate rate will ease down from 52% to 47% come spring.

The lines on the farm issue probably will be drawn between high price props, favored by the Democrats, and "land retirement" payments to boost incomes, which some Administration officials seem to be leaning toward.

The end result, either way, would be more money in the hands of the farmers, more money to be spent on things made in the cities.

More highway aid seems a certainty. Both sides are working on plans that will hit Congress in January.

WASHINGTON OUTLOOK (Continued)

WASHINGTON
BUREAU
OCT. 22, 1955

Prospect is for a compromise—somewhere between Pres. Eisenhower's proposal to finance road building outside the budget and the House-defeated bill, by the Democrats, for user taxes to meet the yearly expenditures.

User taxes probably will go up—taxes on tires, gas, and oil. But the rises won't be so steep as those that truckers stopped this year.

School aid will remain in doubt. All sides would like to vote more federal money. But there's dispute over financing methods. And then, there's the matter of no segregation, which may again block action.

Foreign policy will feature in political debate. The GOP will benefit from peace. But Democrats will make the most of cracks in this plank. Here are things they will point to:

German unification seems as far off as ever as State Secy. Dulles makes plans for next week's Geneva talks (page 27).

European rearmament is going slowly and may even come to a halt if Russia reinforces its new-look-for-peace maneuvers.

The Israel-Arab situation is worsening. Shipments of Red arms to Egypt might set off a shooting war.

In the Far East, trouble still smoulders—Korea, Formosa, and in Indonesia, where the Reds are making political gains.

On politics, note the opinion polls. In appraising them, remember that support shown for this or that candidate ahead of nominating conventions can switch sharply once parties pick their standard bearers.

Warren ranks as the top GOP vote-getter—could win today according to the pollsters, over either Stevenson or Harriman on the Democratic side.

Stevenson shows on top for the Democrats. While the polls say he would lose a race with Warren, they show him defeating Nixon.

The real lining-up will come after Eisenhower's decision. Until he takes himself out of the race—if that's to be his decision—you can expect booms for every possible candidate. Most politicians agree that Eisenhower can, if he wishes, pretty well pick the GOP's 1956 nominee. Meantime, favorite sons will be pushed forward.

Treasury Secy. Humphrey is mentioned more and more in the speculation. You hear it in business circles and also among some GOP candidates for the House and Senate, who figure Humphrey would help them win.

Ex-Gov. Dewey of New York also is getting more and more mention. Friends, however, insist he is not a candidate and see the boom for him as a favorite son maneuver. New York has the largest single block of delegates of any state and the man who controls them has big convention influence.

Nixon is "the man to beat" for the GOP nomination. While the polls put Warren ahead as a vote-getter—Republican votes, Democratic votes, and independent votes—Nixon is the favorite of GOP party members to succeed Eisenhower, if the President does not run. It's significant that men in both the Dewey and Taft factions of the party say they can support the Vice-President.



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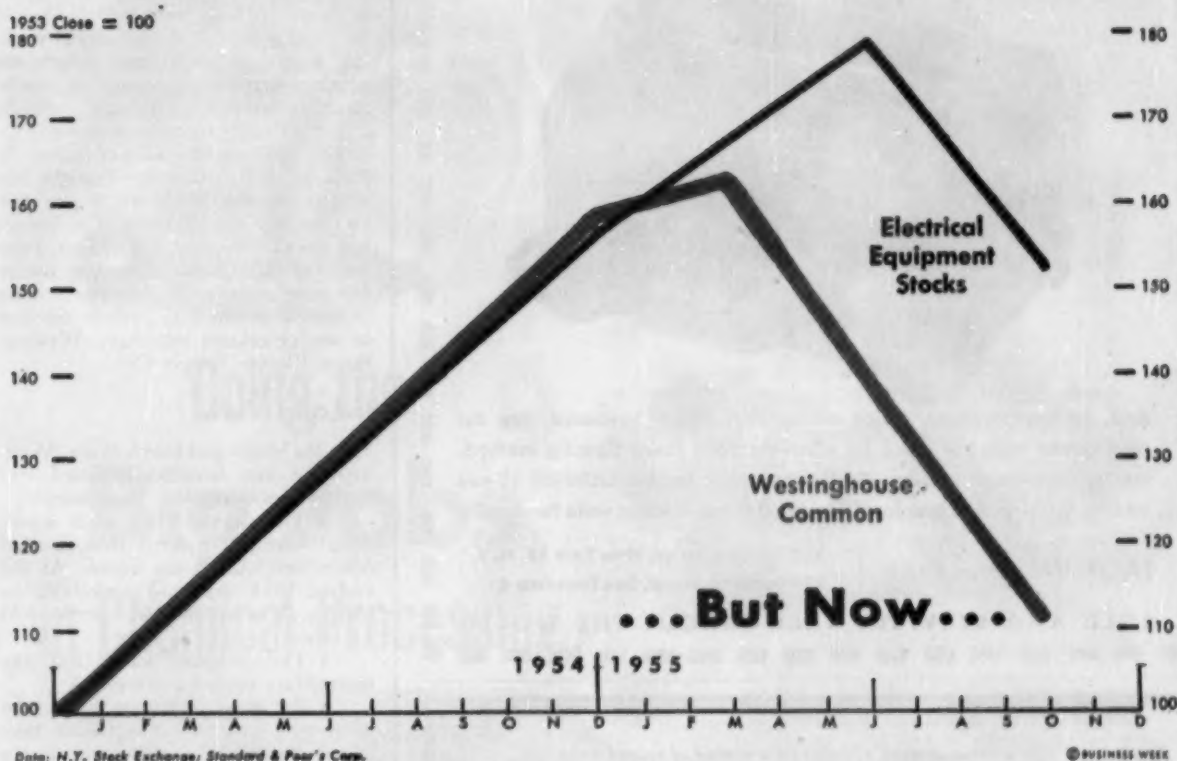
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Westinghouse Common Once Led the Pack...



Westinghouse Gets a Cuffing

Even a giant can get trampled in a bull market rush, as the case of Westinghouse Electric Corp. seems to prove. In the first half of this year, when just about every business was chalking up new highs in sales and earnings, Westinghouse showed:

- A drop of \$55.8-million, or 6.9%, in net sales.
- A drop of 35.2% in earnings—from \$45.4-million in first-half 1954 to only \$29.4-million.

As a result of figures like these—and of the Eisenhower selloff—the stock market has written Westinghouse shares down to about \$57. That's 31% below their 1955 high, and the lowest since March, 1954. It's a sad come-down for a stock that formerly led the electric equipment commons (chart).

• **Blows Pile Up**—The company's year of grief has brought an extraordinary series of blows that, in tandem, have had a staggering effect:

• The Navy canceled Westinghouse right out of the jet engine busi-

ness—only temporarily, the company insists—and earlier the Air Force canceled a large contract for electronic flight and fire control apparatus. The lost orders are valued at "hundreds of millions of dollars."

• Last winter's "white sale" in heavy utility apparatus (BW—Feb. 19 '55, p. 50) produced a phenomenal volume of orders, but at prices shockingly low. Westinghouse will be a couple of years working off this low-profit or no-profit backlog in one of its principal lines.

• The company has been digesting an unusual amount of new manufacturing investment. The new plants bring nonrecurring start-up costs and also take time to get into profitable operation. Meanwhile, accelerated amortization makes earnings look worse than they are.

• Labor troubles have been the gravest in the company's history, culminating in this week's walkout of 44,000 workers in 29 plants.

• **Not All Black**—The picture isn't totally black. Executives find comfort in the view that Westinghouse could easily have ridden out most of the year's complications if they had come singly.

Pres. Gwilym Price, who has taken no end of criticism in this time of troubles, is confident that the recovery is under way. The worst remaining problems, as he sees them, are the labor dispute and the continuing substandard earnings on all that "white sale" business.

• **This Year**—The current pace of operations at Westinghouse supports some optimism:

• New orders are 10% above 1954, which set a record of \$1.6-billion.

• Appliance business—which some people regard as the company's Achilles heel—is up substantially. Production is 13.6% ahead of last year's record volume, and earnings have risen despite some price cutting on big items.

• Barring a prolonged strike, fourth-quarter net can still bring the

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year's earnings up to the target of \$4 a share set four months ago (last year the company earned \$5.06 per share). Second-quarter earnings ran 30% above the first quarter, though below the 1954 quarter; third-quarter earnings were impaired by vacations and a strike at East Pittsburgh.

• For 1956, the company is working toward a preliminary target for earnings that's high enough to soothe most stockholders though officials aren't yet ready to make it public.

The 1955 profit goal was revised by Price in June, when he brought key officials to Pittsburgh for a pep talk on economy and efficiency. The budget had already been cut \$20-million. Price put still more heat on cutting manufacturing costs. But sales staffs were expanded—as much as 20% in the case of one prominent subsidiary, Westinghouse Electric Supply Co.

I. Long View

In the longer and broader view, Westinghouse has been embarrassed and hurt, but not crippled. For example:

• The capital structure is intact. Assets have grown faster than in most companies. Affairs are liquid. At the end of 1954, cash and marketable securities alone covered all current debt 1½ times.

• The company hasn't lost any nonmilitary market position.

• Far from pulling in horns, the company is in more product fields than it was a year ago, and is a lot deeper in many of the old fields.

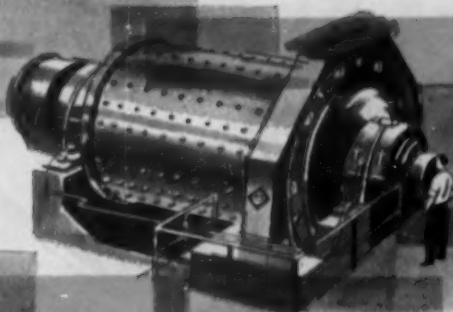
• There has been no panic in Pittsburgh. Westinghouse has made bold investments in half a dozen projects since earnings hit the skids.

• **People Will Talk**—A company like Westinghouse doesn't go through a year like this without being talked about. Thus, you hear no end of chatter about how hard the morale of Westinghouse people has been hit, and about how Price's leadership is slipping.

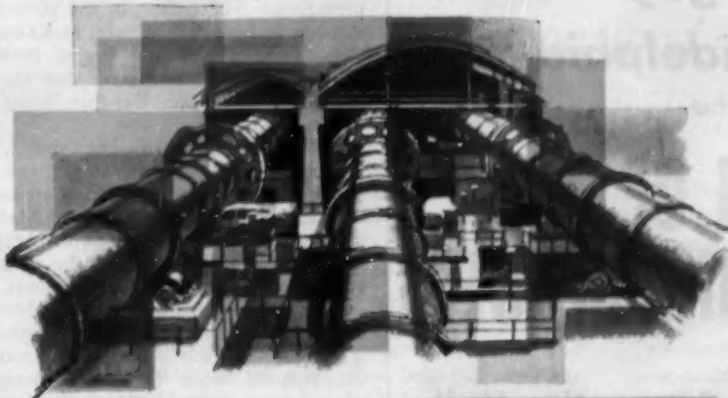
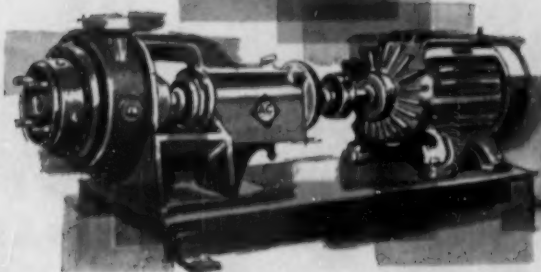
Students of palace protocol have had more to talk about since the board of directors elected Mark W. Cresap, Jr., as executive vice-president and deputy chief executive officer last August (BW—Aug. 27 '55, p34). This move seemed to make the heir more apparent, and some say it edged Price away from the center of power.

On the other hand, for at least three years some outsiders had been insisting that Cresap was about to take over the presidency, with Price shifting to chairman. Yet in August, the directors not only continued Price as president and chief executive officer but also named him to the long-vacant post of chairman.

Even so the gossip and speculation go on, and the fact that there is un-

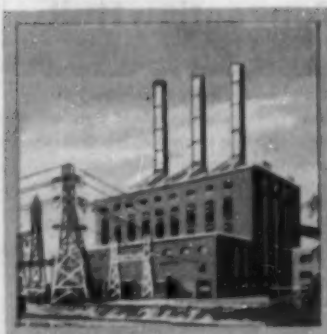


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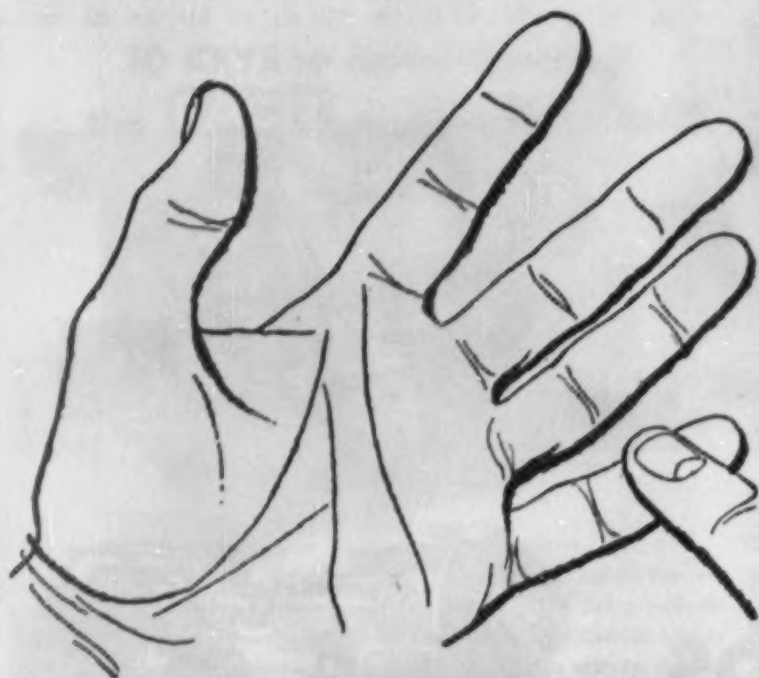
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favorable talk about the company is itself a problem for Westinghouse.

II. Sales Snafu

The company's reputation and earnings have been even more directly affected by the year's series of troubles in military and civilian product lines.

• **Jet Engines**—On jet engines, for example, Westinghouse has ridden the yo-yo all the way up and down again.

On Dec. 8, 1941, Westinghouse got the unenviable assignment of developing the first all-American jet engine. Its engineering team developed the axial-flow principle, now standard for all jets, and incorporated it in the J-34 engine, still widely in use.

When it came to a more powerful successor to the J-34, Westinghouse assumed that the same engineering team could do the same job on the J-40. It couldn't. The J-40 went through several models. One died early. Another limped along, dogged by excessive fuel consumption, through cancellations of \$165-million of orders up to last July. Another survived until a small contract ran out last summer.

Today, this once-huge producer of jet engines has nothing in commercial production. However, it has a new engine, the PD-33, that it expects to sell. It has invested \$20-million in preparation: \$12-million in the government-owned plant it operates at Kansas City, \$8-million in the engine itself. Westinghouse people wince when they talk about jet engines, but they haven't quit trying.

• **Aviation Electronics**—The story is less clear on cancellations in the company's air-arm division, which makes hush-hush electronic gear for military aviation. Air Force security rules keep secret both the product and the dollar volume involved in the cancellations.

The problem appears to have been much the same as with the J-40 engine: The company was slow on the vast development work that such things require, and it couldn't get the bugs out fast enough to satisfy the military brass. So it lost a huge contract.

• **Heavy Power Equipment**—The foul-up in the heavy utility apparatus business is far simpler.

For years, the equipment builders, such as Westinghouse and General Electric Co., have urged power companies to buy turbine-generators on a regular schedule, based on the demonstrated fact that power requirements double every ten years. But in late 1952 and all through 1953, everyone was talking recession, and in 1953 and 1954 the utilities were reluctant to order. What we got, of course, was not only "the best-advertised recession in history" but also one of the mildest.

But this didn't help the turbine



How to save taxpayers' money while spending it . . .

National defense is unavoidably expensive. But even pennies-by-the-billions can be "squeezed"—as this short story proves.

The equipment in the rear of that jeep up above is a GRC-19 radio transmitter and receiver, made for the U. S. Army Signal Corps. It provides two-way radio communication on short-wave frequencies. And it has to do its job even when bouncing over the roughest terrain . . . and under every kind of combat condition.

For several reasons, including the very practical one of dispersal, complete GRC-19 equipments are manufactured by three companies, one of which is ours. The quality and performance specifications are really tough.

Each unit, for example, contains over 1500 individual parts—yet the outfit has to be made on a mass-production basis. Included in the components are 75

complicated tuning coils the inductance of which has to be kept within a split-hair tolerance. And the whole completed radio, with many parts as fine as a Swiss watch, has to be assembled to resist shocks as imperturbably as if it were a tank.

The Signal Corps has adopted the product as "standard" for many applications, but also asked if cost could not be reduced by eliminating some of the automatic features. We went to work at once and have just arrived at a redesigned model which serves the purpose in many applications and saves the taxpayer a whopping 40 percent!

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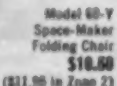
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(Zone 2—Texas and 11 Western States)
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builders. Their products are built to order, carry a lead-time of 24 to 30 months. The manufacturers were loaded with work, from previous orders, in 1953 and 1954, but their salesmen couldn't line up business for 1955 and 1956.

So, the big builders staged their famous "white sale." They generated scads of business—mostly at prices far below normal. This loss-leader business has been further hit by rising prices of steel, copper, and labor.

III. Digesting Expansion

Westinghouse is still trying to chew what it has bitten off in postwar expansion, and Price rates that problem as second only to the jet cancellations as a cause of the earnings drop.

Westinghouse has gone through two stages of expansion since the war. In the first wave, starting with 28 plants, it added 17 plants in 77 months at a cost of \$150-million. The effect was to double earnings per share between 1945 and 1951. Net worth per share rose 70%.

The second wave of expansion started in 1952, with a \$300-million budget. This time Westinghouse added 13 new plants in 40 months.

• **A Fast Write-Off**—This expansion shows up, of course, in the depreciation accounts as an expense offsetting income. Accelerated amortization accounted for \$9.9-million last year, will run about \$11-million this year.

At the same time, the brand-new plants have had the usual start-up problems, as those of the \$150-million expansion program did.

IV. Labor Strife

The end is not yet in sight for the company's labor troubles. In the first nine months of 1955, Westinghouse lost 5-million man-hours of production. It suffered 58 work stoppages at plants organized by the International Union of Electrical Workers, 36 at United Electrical Workers plants, and one-of six weeks—at the United Auto Workers jet engine plant. Says a spokesman:

"We've lost more than three times as much time per union-represented employee in 1955 as in any other year since we've been keeping records."

In the face of this record, and this week's strike over the wage reopener clause in the two-year contract, some people profess to see improvement in the company's labor relations.

Others, however, look with gloom on the labor situation in the whole electrical manufacturing industry. As long as the CIO's IUE and the leftwing UE, ousted from CIO, compete for bargaining rights, employers face an inevitable whipsawing, they say. **END**

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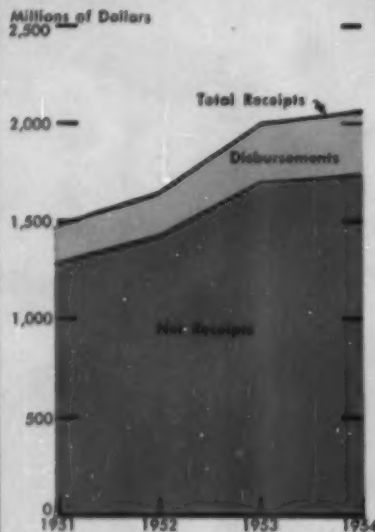
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*Layne Associate Companies
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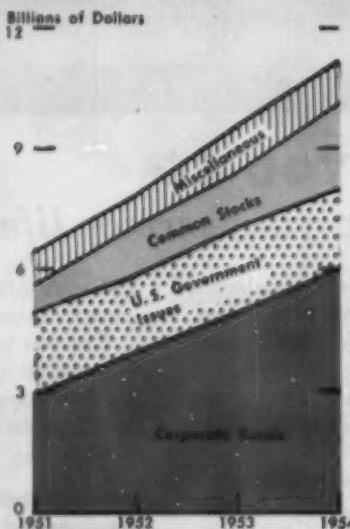
The Pension Funds:

Their receipts have been rising sharply . . .

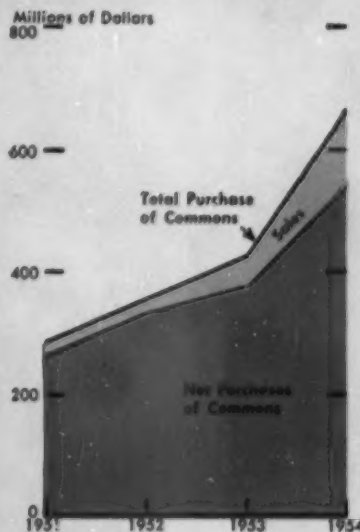
. . . and so have their common stock purchases . . .



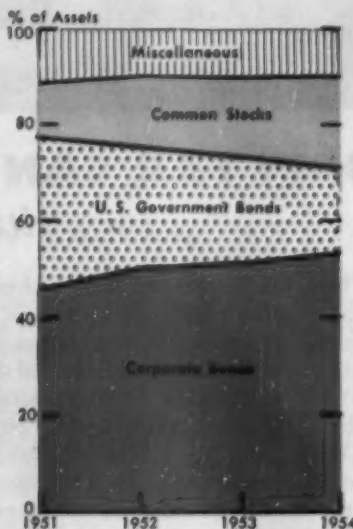
. . . but commons are still a small minority of holdings . . . dollarwise . . .



Date: Securities & Exchange Commission.



. . . and on a percentage basis.



BUSINESS WEEK

Common Stocks Gain

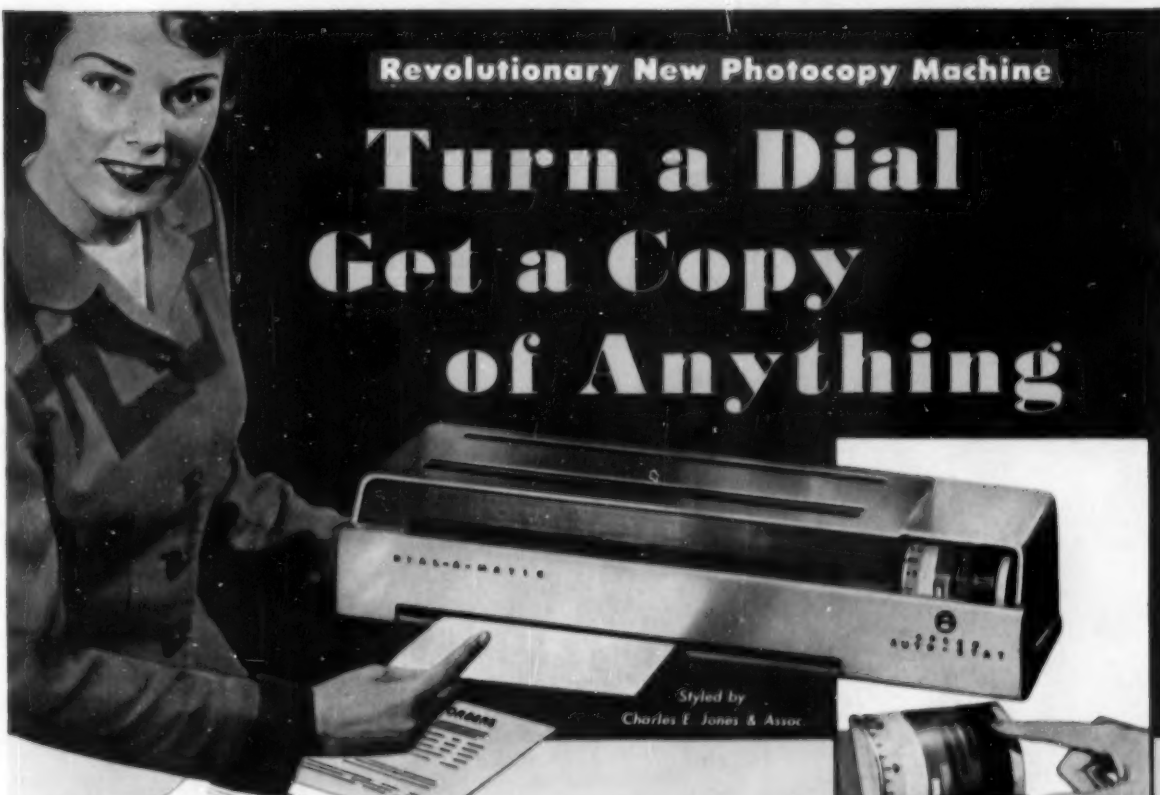
Some of the guesswork about the role of corporate pension funds in the securities markets was removed last week when the Securities & Exchange Commission released a study of the investments of all corporate pension funds not administered by insurance companies. The study showed that the

funds had assets of \$11.2-billion at the end of last year, up about 75% in four years.

About 53.5% of the pension fund assets is held in corporate bonds; with 18.5%, around \$2-billion worth, in common stocks and 17.8% in U.S. government securities. These are car-

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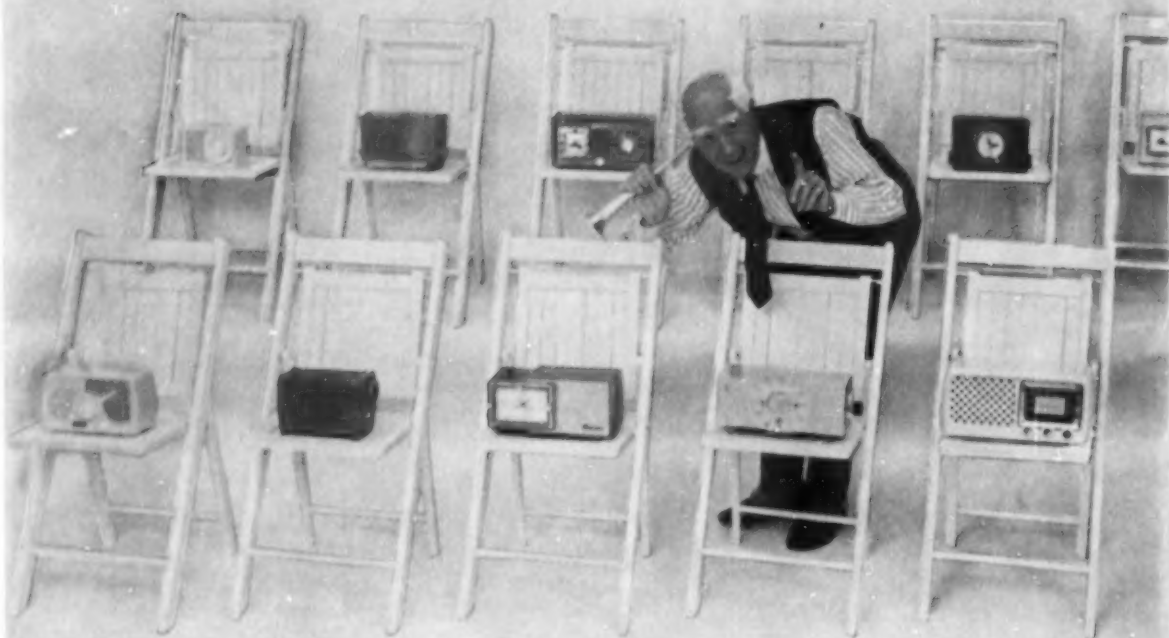
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ried, in most cases, at cost. Since 1951 the funds have gradually whittled down the percentage of their U.S. government holdings; common stocks have been the big gainer.

In 1951, the funds had net purchases of \$257-million of commons, and commons were only 11.3% of assets. Last year, net purchases of commons totaled \$539-million.

FINANCE BRIEFS

"Colleges and universities must not expect too much too soon" in the way of financial support from business corporations" (BW-Jan. 8 '55, p. 78). That warning comes from Irving S. Olds, former U.S. Steel chairman, who is now chairman of the Council for Financial Aid to Education. He says that "contributions from alumni and private donors must be stepped up . . . [if they] . . . are to survive."

The public is more concerned with a guaranteed return of principal invested than with decline in purchasing power of principal. That's one main finding of a University of Illinois survey covering 600 Decatur (Ill.) families. Other results: 55% thought governments were the safest of all investment; about one-third also considered governments "best" for return in comparison with real estate, savings bank deposits, life insurance, and corporate securities.

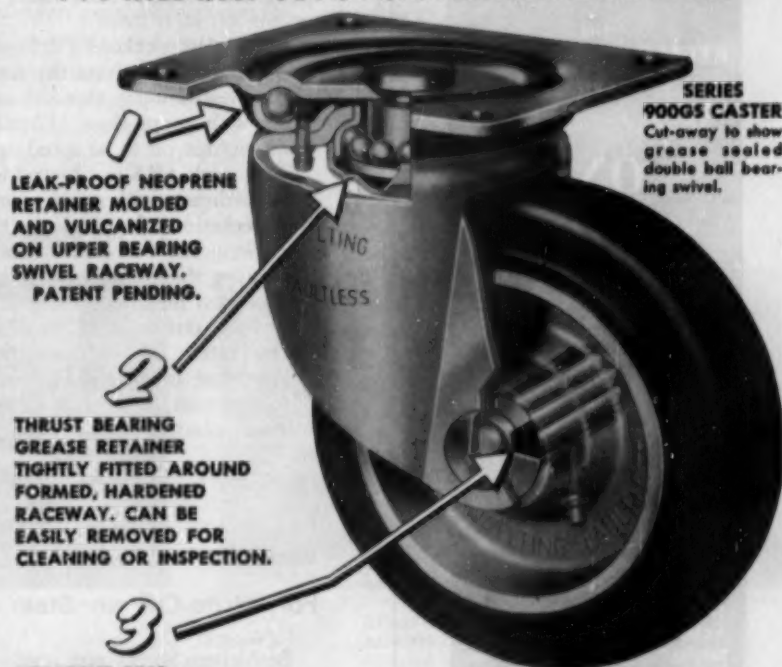
Competition among makers of electric power plant equipment (page 43) has sharply lowered the estimated costs of many utility expansion programs. Idaho Power Co., for example, has announced that the contract prices for \$13.6-million of apparatus just ordered for its two Snake River hydroelectric projects disclose savings of 30% to 45% on the equipment's estimated cost last year.

The 1955 tax bill for life insurance companies will exceed \$500-million, Alfred N. Guertin, American Life Convention actuary, estimates. Federal income tax payments, he says, will likely run "upwards of \$189-million," and state imposts will amount to "about \$242-million." Thus, Guertin says, taxes may absorb \$3.50 of each \$100 of the life trade's premium income this year.

Railroads must spend another \$6-billion on capital improvements in the next five years if they are to continue meeting the nation's transportation needs. That's the estimate of William T. Faricy, Assn. of American Railroads president. The roads' postwar capital improvements, he figures, have cost almost \$11-billion so far.



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In Washington

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Latest Floods in the Northeast

Overshoot SBA's Disaster Loan Fund

Last weekend's floods in the Northeastern states gave a final push to demand for disaster loans from the Small Business Administration. Earlier floods in the same area (BW—Aug. 27 '55, p. 26) had brought SBA loans close to the statutory \$25-million ceiling on such loans.

Before last weekend's deluge, SBA had approved \$15.5-million in loans stemming from the August hurricanes. With \$7.5-million already outstanding, this left only about \$2-million in the disaster fund—with more than \$12-million in applications from August flood victims yet to be acted upon.

This week, SBA was braced for a new wave of applications from the Northeast—with a new source of loan money rigged up during the weekend. Men high in the Administration conferred with key Congressional leaders and reached an understanding that (1) raising the \$25-million ceiling would be among the first acts of Congress in January, and (2) SBA could meanwhile make disaster loans out of its \$125-million revolving fund.

One catch: By law, loans from the revolving fund must draw 6% interest as straight business loans; disaster loans are made at 3%. However, as soon as Congress raises the \$25-million ceiling, interim disaster loans from the revolving fund will revert to 3%.

• • •

Bethlehem Gets an Exception

For Write-Off on Steel Plant

Bethlehem Steel Corp. is getting five-year amortization privileges for \$30-million of new steel facilities, but this is no reversal of the government's clampdown on tax aid for steel capacity in general.

To begin with, Bethlehem's expansion is in heavy plate, one of the 33 materials for which the Office of Defense Mobilization will still grant fast write-offs. The exception for Bethlehem had to be made in another respect: ODM had turned the company down on the ground that expansion of heavy steel plate capacity at Sparrows Point, near Baltimore, wouldn't comply with plant dispersal rules. Baltimore is a critical target area.

Bethlehem appealed, and the Defense Dept. went to bat for an exemption from plant dispersal rules. Said the Pentagon: We can't get anyone else to make this steel plate for ships and tanks.

• • •

Court Opens Gate for Claims

Of Overpayment on Tax Write-offs

Companies that got only partial five-year tax write-offs on defense plants during World War II should have had fast amortization on 100% of the cost. Hence claims for overpayment, already topping \$62-million, must be paid to some 40 companies. The



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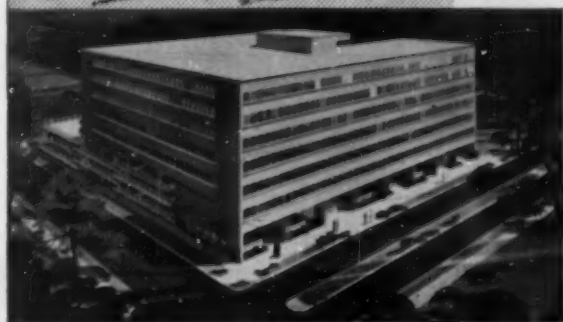
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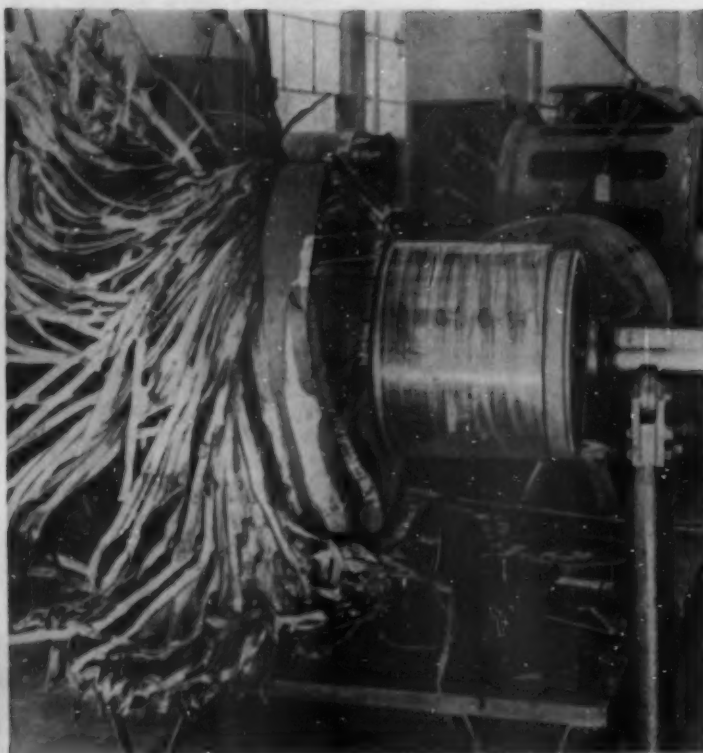
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combination of high wartime profits and high wartime taxes—which declined after war's end—made the difference. (Had tax rates and profits stayed at wartime levels, the tax would be roughly the same, regardless of how much amortization was allowed.)

The Supreme Court this week left standing a ruling that the War Production Board had no authority to issue certificates allowing less than full cost. The government had sought to upset this Court of Claims award, which gave \$6-million to Ohio Power Co. after WPB had allowed it only 35% write-off on an \$11-million plant.

Now government lawyers concede that the Supreme Court ruling presumably applies to other claims now pending, mostly by railroads. And the impact may not end there. WPB policy had been to withhold full fast amortization on any plant or facility that could be used in peacetime, and 80% of World War II certificates were for partial amortization. All may now be invalid.

Recent fast write-off allowances are not affected by the ruling, since the law was changed in 1950 to give the Office of Defense Mobilization full authority.

• • •

Airport-Less Towns in Line

For U.S. Aid Under New CAA Policy

Towns that have no airport may be able to qualify for federal aid under a new policy adopted by the Civil Aeronautics Administration.

Up to now, communities had to show either that 30 planes were based locally or else that 3,000 paying passengers a year loaded at their airport in order to get the federal money that matches, dollar for dollar, any local funds spent on airport construction.

Now a town may become eligible if it can show, for instance, that local industries, or industries that would like to move into the area, need an airport for company planes.

To get a cut of the \$62.5-million that CAA has to pass out this year, you have to apply by Dec. 1. You can get a booklet on the program—Federal Aid Airport Program, Policies and Procedures—by writing to the Commerce Dept., Washington 25, D. C. The price: 50¢.

• • •

Washington Briefs

In settling the canceled Dixon-Yates contract (BW-Jul.16'55, p29) the Atomic Energy Commission must be careful not to waive the government's right to take the whole thing to court, the General Accounting Office warned. AEC is negotiating how much the government owes the Dixon-Yates utilities combine for preliminary work before the contract was killed.

FM stations are being licensed to sell programs to banks, stores, restaurants, and offices as a sideline to their radio broadcasts. The first licenses will go to WPEN-FM in Philadelphia and WWDC-FM in Washington. FCC says about 40 stations have applied.

Security chiefs of 15 companies will be named to a new Pentagon advisory committee on industrial security policies, practices, standards, and procedures affecting the safeguarding of classified information in the possession of U.S. industry.

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With wide-screen extravaganzas such as United Artists' *Alexander the Great*, Hollywood is luring the audience away from TV and . . .

Getting Them Back to the Movies

Just a few years ago, the motion picture industry, in full flight before the big bully television, was grasping desperately at almost any straw to stay its rout. Now the industry has caught onto what may be a sure formula for survival. Roughly, that formula is: Make them big; show them big; and sell them big.

In adopting this tactic, the movie industry is reversing completely the laws of evolution in other industries. It is turning from a mass production industry to a custom-tailoring industry.

This means that movie makers have shucked their former practice of feeding a steady flow of more or less standardized films into movie houses. The market for this type of entertainment—teenagers and steady movie goers—has been taken over by TV. Today, Hollywood is shooting into the television market by fashioning entertainment

that is attractive enough to lure people away from their TV sets.

- **New Audience**—In many ways, Hollywood is trying to give the public a Broadway type of entertainment. And by showing costlier pictures on extended runs of 8, 10, and 12 weeks, or more, and at road show prices, Hollywood is attracting a new type of customer. This is the person who wants to get dressed up, go out to a smart place for dinner, then take in an expensive show.

Films will still filter down to the neighborhood theatres, but more and more, Hollywood expects to get the bulk of its domestic "take" from first runs at luxury prices.

- **Snowballing**—The trend to bigger—that is costlier to make—pictures is gaining momentum as the industry's top dogs show how firmly they have pinned their faith to the new strategy.

When Twentieth Century-Fox Film Corp. announced its 1955 production program in February, 1954, it planned to make 16 big-budget pictures. Last August, it expanded the number to 30.

Universal-International (Universal Pictures Co., Inc.), which a year ago decided to plug along with more or less standard adventure and outdoor films, has just announced that in its 1955-56 program it will spend millions in excess of previous budgets. More than half the company's 35 pictures will get the high-budget treatment.

United Artists Corp., which releases films for independent producers who pride themselves on making good pictures without big budgets, is "greatly increasing" the number of pictures with a \$3-million-or-more budget.

Jack L. Warner, vice-president of Warner Bros. Pictures, Inc., says "the

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Do you check your cost-per-mile on recaps? Truckmen who do are often genuinely amazed at the results.

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Obviously, recaps can save you a lot of money. Obvious—yet each year truck operators spend a fortune, literally, for tires that deliver little or no recap mileage before they end up on the junk heap.

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Nylon is the toughest material ever to find general acceptance for use in tires. Ounce for ounce, it's even stronger than steel. Nylon can give you far more recap miles than you've ever gotten before.

But—and this is an important "but"—don't expect miraculous results automatically, simply because a tire is built with Nylon. "Who builds the tire, and how?" is fully as important as what material is used.

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Consider, for example, a tire that is quality-built in every detail, built by an industry leader who uses the finest known process for treating Nylon—the Kelly Nylon Super Armor Trac.

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motion picture industry has entered the Cadillac age. Some pictures will still be made at moderate costs, but . . . nothing is exorbitant if it is the right thing.

I. Make Them Big

To protect the capital it is investing in new pictures, Hollywood is buying more pre-tested and pre-sold story properties. Best selling books, the classics, Broadway plays, even successful TV programs are grist for the movie mills today. Original screen plays are becoming the exception. Here, the TV producers are fighting fierce competition, as Hollywood bidding reaches the frantic stage (BW-Oct. 8 '55, p. 30). Some recent prices for Broadway hits were \$360,000 for Solid Gold Cadillac, and \$400,000 for Anastasia, and rumor places the bidding for Pajama Game at \$1-million.

• **Maximum Return**—These prices for stories are so high that Hollywood must custom design each picture in order to get the maximum return on it. Cast, staging, and promotion must be optimum. And in that respect, Hollywood has an advantage over the stage. The flexible camera can journey far beyond the confines of the stage designer. If the story—or any part of it—would look more authentic if shot in the locale of the story, then off the company goes on location. The days when a dozen pictures would be shooting on the same studio lot are gone. Today, Hollywood's production crews are likely to be found on location in every part of the free world.

II. Show Them Big

To draw the line between television and the movie theater even sharper, and to show the pictures in a more spectacular fashion, Hollywood has come up with a brand new round of big-screen devices.

This time, the movie makers aren't just grasping at a new gimmick to stimulate the box office. The new methods just now emerging are based on technological research and development. The knowhow gained by Cinemascope—which started the parade to big screens—sparked a chain reaction in new developments.

• **Wider Negative**—The new systems are based on the use of a broad gauge film in the camera. The industry is standardizing on 65-mm. film, almost twice as wide as the old 35-mm. The bigger negative eliminates the grainy, blurry effect that often results when the old standard 35-mm. negative is blown up for the bigger screen.

From a 65-mm. negative, for example, you can make a direct print of the same size for the super big screen presenta-

tion, or you can print it down to the standard 35-mm. size, which most theatres are equipped for. Either way, you get a clearer picture. Another advantage of bigger film is that it can carry up to seven different sound tracks.

• **Pioneers**—One of the first wide-gauge systems was used in Todd-AO's production of *Oklahoma!*, which uses extremely wide angle lenses and the large size film to give a three-dimensional effect on a giant curved screen (BW-Oct. 1 '55, p. 176). One drawback to Todd-AO is that it can be shown only at specially equipped theaters.

Another system is one co-developed by Metro-Goldwyn-Mayer and Panavision, Inc., a Los Angeles optical company that is matching strides with American Optical Co. and Bausch & Lomb Optical Co., in the movie business. The MGM-Panavision system also uses a 65-mm. film, but company technicians claim it is more adaptable to standard-equipped movie houses. From it, MGM can make prints in any size for any kind of projection—standard Cinemascope, Todd-AO, VistaVision, even Cinerama. Thus any theater can show MGM pictures.

• **Pot of Gold**—The fantastic success of Cinerama—which has shown the same picture for three years to packed houses at Broadway play prices—has convinced Hollywood that there is a gold mine in this field. Every studio is making plans to "road show" its larger productions in a similar fashion. This means they will arrange for one theatre in each large population center to convert to the super big screen type of presentation for long runs of premium pictures.

• **Long Runs**—*Oklahoma!*, which opened in New York this month, is expected to run for one or two years at top prices. Eventually, Magna Theatre Corp.—which was created solely to produce and distribute Todd-AO pictures—expects to have 50 theaters around the country equipped to show *Oklahoma!* and other Todd-AO pictures on extra long runs.

Fox says it will turn out road show versions of *Carousel* and *The King and I*, two Broadway musicals that it is making in its wide gauge 55-mm. Super Cinemascope process. Fox also expects to equip about 50 theatres around the country for long runs of these films.

Ben Hur is MGM's scheduled first entry in the super road show derby. However, the studio is casting around for a suitable picture it can premiere before *Ben Hur*, which won't be ready for at least two years.

Paramount will exhibit Cecil B. DeMille's *The Ten Commandments* on a road show before releasing it to the general run. The picture will cost \$12-million to make, but producers expect

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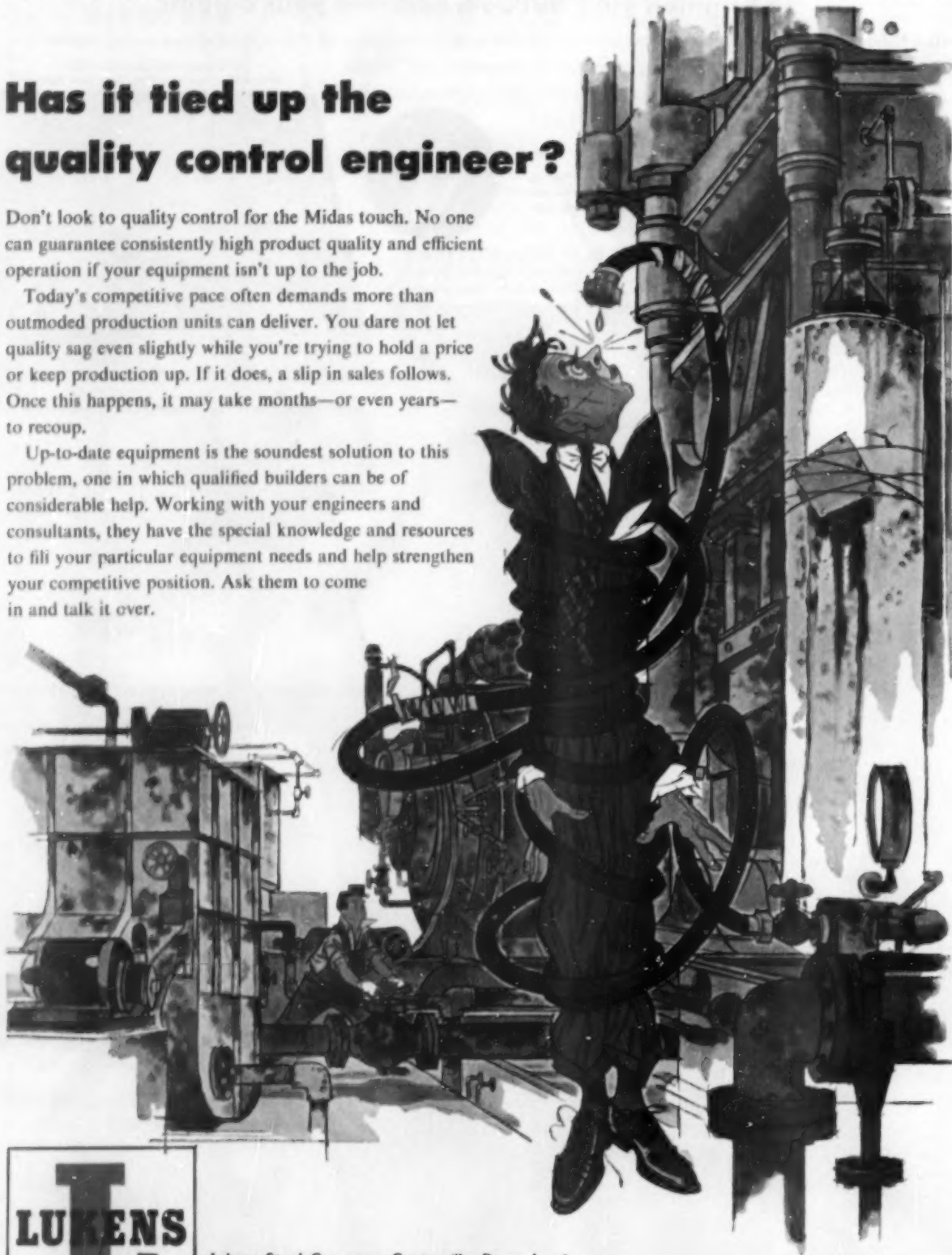
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"... to draw the line between TV and the movie theater even Hollywood has come up with a new gimmick..."

BACK TO THE MOVIES starts on p. 58

to get that back from the road show run.

III. Sell Them Big

In addition to custom-tailoring the story and production, Hollywood also is custom-designing the exploitation of its big new Supers. MGM points out that an average top budget picture will return a gross of \$7-million if properly exploited; but if not, it will bring back only about \$4.5-million.

Up until the advent of television, Hollywood had few promotional problems. It was catering to a habit audience that would go to see anything the studios turned out, and publicity mostly was devoted to superlatives—with emphasis on sex. But as the trend to camp around the TV set grew, the movie magnates found they had to assist the theater owner in selling seats.

The industry then embarked on long range planning to build up a "want-to-see" audience. According to MGM, you can sell only about 12 pictures solidly out of every 40 you make. But these have to be sold as completely as possible. But how do you go about selling properties in advance, without saying they are all the "greatest"? That's where the motion picture industry's great intangible—glamor—comes in.

• **MGM's Campaign**—Take a look at MGM's campaign to acquaint the public with *The Last Hunt*, which will hit the theaters next spring.

The first thing Metro did was to help Houghton Mifflin Co., publishers of the book, boost its sales. This has become standard practice.

Then the studio examined the story for exploitation qualities. It is full of buffalo, Indians, solid Americana providing a world of promotional values.

Since the picture was filmed in the Bad Lands and the Black Hills of South Dakota, where there is a herd of 1,500 buffalo, MGM invited the press from the Plains states to watch the picture being made. MGM also made a deal with *Argosy* Magazine to run a condensation of the story.

Then MGM suggested to Gov. Joe Foss that he hold a big gathering of the Wahoo Club—whose members include Herbert Hoover and Pres. Eisenhower. At the clambake, Wahoo Indians initiated Robert Taylor, star of the picture, into the tribe.

The South Dakota Chamber of Commerce collaborated by sending buffalo meat—including Robert Taylor's recipe for preparing it—to outdoor writers.

In exchange for having Robert Taylor say in the movie, "Give me that Winchester," MGM got Olin Mathieson's Winchester Div. to run four-color ads tying in to the picture. Taylor is shown in 1870 garb with an 1870 Winchester; a modern day hunter holds a 1955 model.

• **Payoff**—The whole idea is to pre-sell the movie so hard that the exhibitor is assured of a big audience in advance of the showing.

Universal-International's film, *To Hell and Back*, is one example of how this type of stepped-up exploitation pays off. *To Hell and Back* is the company's biggest grosser in its 43-year history. It is about 36% better than *The Glenn Miller Story*, and 54% better than *The Magnificent Obsession*.

Paradoxically, one of Hollywood's biggest single promotion devices is its arch enemy, television. That is largely why the major studios have gone into telefilm production. Every hour of film they make for TV contains 9 min. of promotion for upcoming motion pictures. The commercial sponsor gets the other 6 min. With television in 32-million homes, Hollywood in effect has 32-million billboards to showcase its ware. According to Jack L. Warner, "There is no longer any doubt of the potency of TV for selling movies. Warner Bros. uses television 100% to sell pictures."

Still another trick with television is to gauge the potential of a story by trying it out on TV first. Mark Hellinger's story, *The Thousand Dollar Window*, will be made into an hour telefilm first. Comment cards will be mailed to 5,000 motion picture exhibitors, asking them to see the TV show and criticize. With these as a guide, the producer will plan his theatrical version of the story.

Another popular piece of exploitation is to serialize the motion picture story and furnish it free, or at a nominal cost, to newspapers.

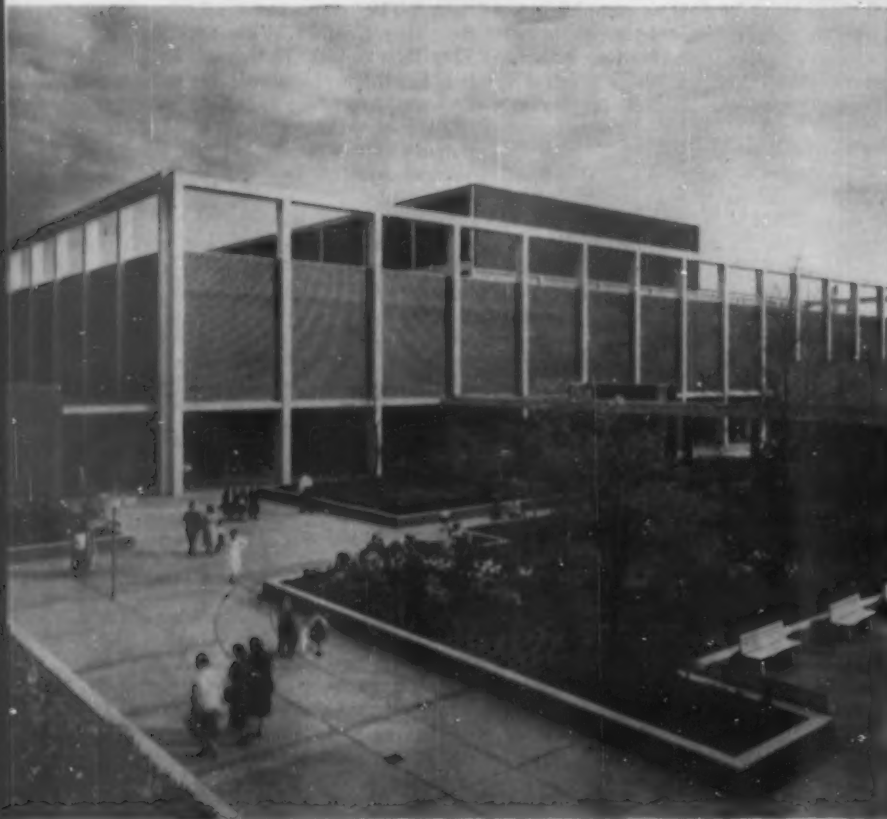
The motion picture makers also are moving toward closer tieups with the books they make into movies. They try to get publishers to schedule the publication of the book closer to the date of the movie release. If the book is a hit, it helps pre-sell the movie.

One thing Hollywood has discovered is that there's no danger of "over exposure" of a story. Having the story in book form, newspaper serial form, stage version, or telefilm apparently only whets the appetite for the movie version. **END**

Victor Gruen: The architect of the famed Northland shopping center makes a bold proposal for treating downtown's ills.



"Downtown Needs a Lesson



In Northland, the shopper is a pedestrian. Gruen used old market-town concept, placed stores in tight cluster, but left room all around for landscaped malls and courts.

"Look at it as an experimental workshop, a place where we've been carving the forms for what may be tomorrow's city." This is Victor Gruen, designer, architect, and more recently planner, talking about the regional shopping center. "It's taught us a lot about planning commercial centers. And these lessons—learned in the suburbs—can be the salvation of downtown," he says.

Gruen is the architect of the biggest and probably best-known of all U.S. shopping centers—J. L. Hudson Co.'s fabulous Northland, near Detroit. He is also one of the many people who feel the problem of downtown is no longer whether it needs reviving, but only how it can best be revived (BW-Jan.15'55,p42).

• **The Cure**—This week, Gruen set down his own prescription—to apply the rules that have been put to work in suburbia—in a speech to the annual Boston Conference on Distribution. At the time when so many American cities are trying to doctor the ills of their downtowns, many businessmen will consider his ideas arguable. But none is apt to find them irrelevant.

A roundish, restless man of 52, Gruen is one of a growing school that believes that trees and benches do sell merchandise—and that what downtown needs, at least partly, is more of them. As a planner, his theories carry the definite stamp of the years he has spent in commercial architecture and design. Gruen himself makes a point of saying



From the Suburbs"

that he arrived in planning by an unconventional route—through designing candy stores, specialty shops, and department stores—rather than by customary academic paths.

An emigrant from Vienna in 1938, Gruen (he shortened the named from Gruenbaum during the war) made his U.S. reputation as a store architect. The Northland commission was simply the end of a long climb that carried him from small Fifth Avenue shops, to chain-store design for Barton Inc. (the candy chain) and Grayson-Robinson Stores, Inc., to part of the work on Macy's new department stores in Kansas City and San Francisco.

"Most of these were just stepping stones," Gruen says. "I realized long ago that good architecture in small, scattered spots is ineffective. Your work is lost unless you develop larger units."

Northland, which the magazine Architectural Forum hailed as "a classic in shopping center planning," was the beginning of a succession of these large-unit assignments for Gruen & Associates. Since the center was started in 1952, Gruen's firm has gone on to work on Eastland, the second J. L. Hudson center in the Detroit area; Southdale, near Minneapolis; Bay Fair in the Oakland (Calif.) area; Valley Fair, at San Jose, Calif.; and Glendale, near Indianapolis. It has drawn the plans for a regional health center near Southdale, in Minneapolis. In Detroit, Gruen is one of the three architects

of the Gratiot redevelopment project, a pioneer attempt at mixing races, income levels, and types of housing within one urban renewal area. More recently, the firm has been completing a plan—commissioned by private businessmen—for the redevelopment of the downtown district of a city of 500,000 people. The name of the city is still being kept under wraps.

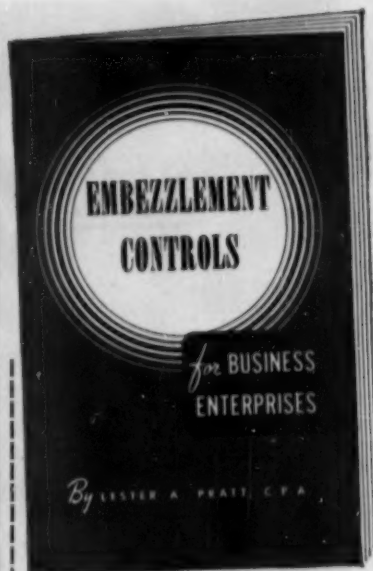
• **Danger of Suspicion**—Gruen, by no means sole proprietor of the theories he expounds for downtown, believes very little can be done unless a community is ready to accept the dictums of planning and controlled land use. And there, he admits, is a rub.

"There is a strange reaction to the word 'planning' from men in the business world," he says. "They seem to feel that planning would somehow interfere with the free expression of individual initiative."

"What they should stop to realize is that all our American cities are planned. We planners are only suggesting that you have to bring old outmoded plans up to date."

One of the troubles with technical progress, Gruen feels, is that it has showered us with all manner of machines and gadgets to make it possible to go where we want. But it has also reduced the number of places to which it's really worthwhile to go. Downtown, he thinks, now fits into that marginal category.

Must it remain this way? Gruen



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can help
prevent*

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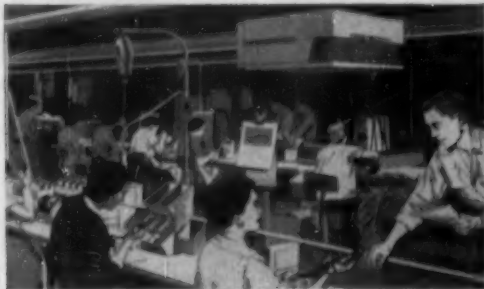
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thinks not. A rebuilt downtown would again be able to serve its original trade area satisfactorily. And, to him, the best model available for rebuilding is the regional shopping center.

By translating its principles to downtown, Gruen would, in many ways, turn the city back toward its original concept as a market place. The keys to his thinking are that people should walk—not ride—once they are within the market place, and that stores and services should be grouped within logical units. "A cellular system of city planning," he calls it.

• **Candidate for Revival**—Gruen believes that such a system is as practical—and possible—for downtown as it has been for the suburban center. To illustrate his theory, he draws from what he has already executed at Northland, and from what he has proposed for the so-far nameless city of 500,000 people—City X.

Northland, which is built on a 160-acre site, serves a suburban trade area of about one-half million people. About 300 acres around it have been set aside for future centers—recreation, health, entertainment—to be planned along shopping center lines. Lying beyond the 300-acre preserve are stable residential communities. Access to the

Northland site was good at the start and, with minor improvements, it became excellent.

City X, with its population of 500,000, has a downtown area covering roughly 300 acres. It is surrounded by towns and villages that add considerably to its trading area. There is nothing wrong with the location of its downtown, but unlike Northland, its access is bad and in need of overhaul. The site is densely built up with structures ranging all the way from skyscrapers to one-story shacks. Around it are slums, blighted areas, and only in the far distance, healthy residential communities.

• **Applying the Cure**—In both Northland and City X, Gruen has basically four planning goals: (1) the most productive use of land; (2) the free flow of traffic throughout the feeder area; (3) the separation of service traffic, pedestrian traffic, and auto traffic within the center; and (4) integration of commercial and noncommercial activities.

To get the most productive use of land in Northland, Gruen concentrated all commercial activities into a compact cluster of buildings, with stores grouped so as to minimize walking distances and servicing problems. He placed the Hudson store—the center-

piece—at a point where people would have to walk past the other stores to reach it.

"In planning City X," Gruen says, "we proceed by elimination of obsolete structures and nonconforming uses and in creating a number of highly compact entities, well-connected with each other and with minimum walking distances within each of the entities. By bringing order to the surroundings, we are at the same time able to create open space."

To bring people into Northland easily, Gruen had relatively little to do. For City X, there is a great deal: the construction of a loop road around downtown, the improvement of the present arterial system, and a new rapid transit net. Gruen's master plan proposes all of these. And it sets up an elaborate blueprint for separating the various types of conflicting traffic.

At Northland, the plan called for a parking area for 8,600 cars, with reserve space for another 3,000. Surrounding the building group are separate roads for buses that bring passengers into a central terminal. All service traffic, has been channeled underground. The pedestrian areas—landscaped courts, malls, arcades, and lanes—are free of any vehicular traffic.

In City X, Gruen would use much the same pattern. He proposes parking terminals, with a capacity of 60,000 cars, along the loop freeway that rings the central district. Buses, taxis, and airport limousines would move off the freeway onto public transportation loops that would penetrate into the business district for a few hundred feet. Service traffic would be consigned to an underground road net.

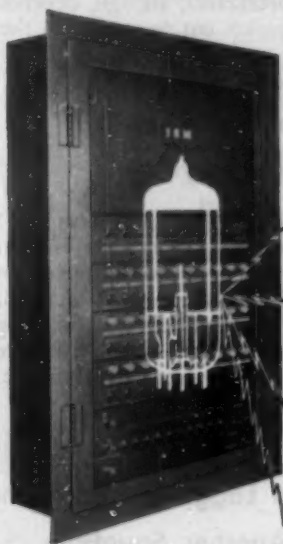
• **Back to the Feet**—No private surface traffic would move in the whole downtown area. The streets would be landscaped into pedestrian areas, where there would be sculpture, trees, benches, and flowers, as there are at Northland. The only way to move from place to place downtown would be by foot, or by a small electric train, similar to those used at the New York World's Fair.

Gruen believes that with all this would have to go a redevelopment of the blighted areas around the city core—"not by building new slums with plumbing, but by creating truly organic neighborhoods." He admits the task is staggering, but believes it can—and has to be—done.

Gruen has a faith in the future. "The breakthrough of common sense is coming," he says. "If I can assess what is significant about Northland, it is that it introduced a new spirit—that a commercial center must be a place that builds not just trade, but good will, too. And unless I'm wrong, that spirit is being blown downtown right now." **END**

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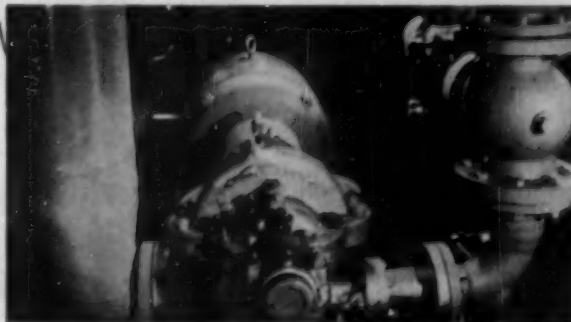
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In Regions

. . .

Charleston Likes It

Without Its Highway Bridge

CHARLESTON, S. C.—From the look of the Ashley River, you'd have thought Charleston was trying to stage another evacuation of Dunkirk. Canoes, cabin cruisers—almost everything that floats—have been on the river the past couple of weeks as commuters have tried to get to work.

The community has been literally cut in two since a tanker wrecked the only highway bridge across the river early this month. The span, linking Charleston with the West Ashley suburbs, is the most heavily traveled in the state.

Since the bridge went out, commuters have been either boating it or riding a shuttle train that the Seaboard Air Line RR has put in service across its trestle. What no one anticipated, though, was that many people would like it—both the boat trips and the train. This week, as temporary repairs on the bridge neared completion, there were suggestions that Seaboard keep its service on a permanent basis.

. . .

Downtown in the Crystal Ball—

Moving Sidewalks, Fewer Cars

MEMPHIS—The annual meeting of the International Downtown Executives Assn. here last week heard at least two predictions to ruffle the imaginations of businessmen.

Randall Cooper, president of Chicago's State Street Council, said that within 75 years, downtown will have some kind of moving sidewalk to move people around, without today's vehicular congestion. Cooper said some cities will also be linking their big buildings with second-story promenades. "We have one on the drawing boards now in Chicago . . . to connect all our major department stores" along State Street.

James C. Downs, Jr., Chicago's housing-redevelopment coordinator said that within 25 years, all big retail stores will be open on Sunday. It's "silly," Downs said, for downtown stores to be closed just when shoppers have the time they want to shop.

. . .

Toledo Shoppers to Ride Free

To Help Speed Downtown Buses

TOLEDO—Starting Dec. 1, the Community Traction Co. is going to try something it thinks no other big transit company has attempted—offer free transportation around downtown.

CTC will put the plan into effect for 60 days in a

24-block area in the heart of the business district. Any passenger who boards one of its buses in that area, bound for another point within the district, will ride free. The idea, CTC says, is to speed up the movement of buses through downtown by eliminating the process of fare collection. At the same time, it hopes to win over some converts to bus travel from among the shoppers.

Actually, the company doesn't expect any loss in revenue from the scheme, since few people board and leave buses solely within downtown. Whether the plan will become permanent, though, depends on just how the company makes out financially in the tryout.

. . .

NAM's Americade a Hit

At Opening in Syracuse

SYRACUSE—The National Assn. of Manufacturers premiered its traveling Americade exposition to crowds of about 10,000 for its three-day stand here last week.

The exposition is supposed to dramatize "attainable improvements in human and scientific progress" by 1975, and to show how strengthening of research, competition, and profits is essential for a brighter future. NAM plans to show it free in most big cities.

. . .

New York's Lagging Waterfront

Starts Up Another Squabble

NEW YORK—The city took another rap last week for the sagging state of its once-proud waterfront.

John M. Leavens, executive director of the Citizens Budget Commission, said that since 1948 the city's record has been so poor as to raise "grave doubts" whether it can ever do the promised pier modernization job effectively. Leavens said the city ought to turn over its piers to the Port of New York Authority.

Irritated, the city fired back, quoting ex-Mayor LaGuardia that it "would be a damned fool thing to give up its waterfront."

. . .

Wrap Up Your Troubles

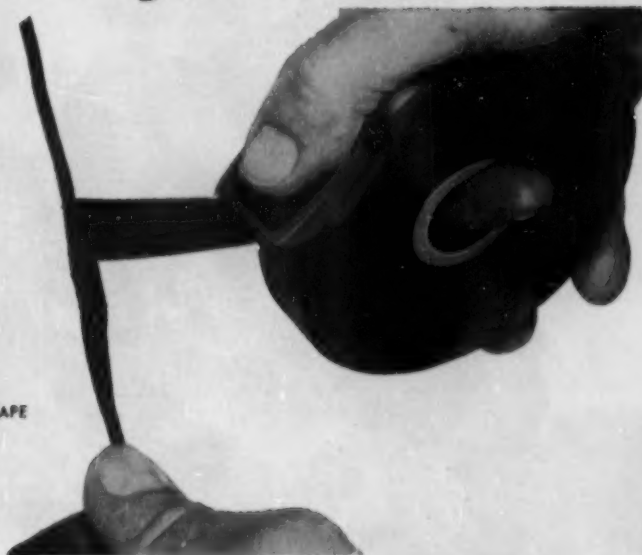
In an Old Cotton Bale

BIRMINGHAM—Thirty-two pounds of cotton have produced a bale of trouble for Joe B. Killian.

Killian, who runs a service station and souvenir stand in Cuba, Ala., decided to plant a garden-patch of cotton—to give tourists something to photograph and some bolls to take away. So he planted 16 rows, but never bothered about a government allotment. Then trouble started.

First government agents figured his yield—36 lb. Then they fined him \$6.37 for growing without an allotment. Killian wrote the Secretary of Agriculture, protested he was growing cotton for tourists, not for sale. He got no sympathy. Eventually, he paid the fine. Now he figures he has to sell the cotton that's left to get his \$6.37 back.

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Materials:

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In the last half-dozen years, conditions have changed. Raw materials stand blinking in an unaccustomed limelight. Instead of concentrating on how to produce the most product at lowest cost and sell it to the most people at the best price, businessmen are forced to worry about the ever increasing consumption of materials.

More has been written and discussed on this subject in the last five years than in the previous 20. The materials supply is a worldwide concern among economists and politicians. In industry, the purchasing agent has taken on a new importance; in some businesses at some junctures, he's the most important man around.

• **Sharp Reminder**—Business has been brought up sharply on the commodities tether in recent months by the climb of important materials prices. More than ever, businessmen must ask: Is this a temporary fluctuation in the market or is it a long-term trend that we'll have to adjust to?

As a buyer in worldwide markets, the U.S. must look at world supply and demand. And the answer comes out something like this:

• World manufacturing is outgrowing the production of raw materials at this moment. The gap between new capacity for manufacturing and new capacity to produce raw materials will be the widest this year that it has been since the war. But . . .

• In terms of world trade, it is becoming steadily more profitable for countries to develop raw materials rather than ignoring them in favor of building up manufacturing. More and more this trend looks permanent.

Put the two factors together and you have the reason (1) why commodity prices have been rising and (2) why new sources will continually be brought into production (picture) to restore the balance.

I. U.S. vs. Europe

American business must take a world view on raw materials, even though the U. S. is still by far the biggest supplier of its own needs. That's because this country has, in 20 years or so, switched from being a net exporter of

RICH AFRICAN SOURCE of iron ore is Republic's Bomi Hill mine in Liberia.

The Balance Shifts

some important bulk materials to being a net importer. This happened in zinc in the 1930s, copper and oil in the 1940s.

As domestic demand continues to grow and reserves—both known and potential—dwindle, dependance on foreign supplies of commodities will increase. Iron ore is slated to be next among major commodities to be imported heavily (BW—Oct. 15 '55, p. 96).

You can't count on foreign sources without running into economic and political questions. Most new supplies will have to come from areas that are now underdeveloped. There's plenty of stuff in the ground, but will these countries either be willing to develop the resources themselves or to welcome foreign investment for the purpose?

• **Market Rivalry**—Then, too, there's the competition from other countries for available supplies. The rest of the world is no longer content to envy U. S. standards of living—it wants them, too, particularly in Europe. In the huge underdeveloped regions—Asia, Africa, Latin America—nationalism is producing economic demands every bit as urgent as political demands. Some are at the stage where per capita use of fuels and metals will start expanding fast. Sooner or later, their demand will have to be reckoned with.

In Europe, the call for materials is here already. Since 1948, manufacturing output in western Europe, sparked by France and Western Germany, has jumped a massive 82% while development of raw material to support this output has risen only 35%. Europe is competing actively with the U. S. in world commodity markets.

You could see this when our 1949 recession weakened raw materials prices. World trade experts say this aided Europe's industrial growth by leaving a plentiful supply of materials available at favorable prices. Again, in 1953, European demand took up the slack when a recession reduced U. S. buying; world prices stayed firm.

II. Variable Supply

In the commodities market, there's nothing sacred about contemporary positions of supply and demand. Both are variable according to circumstances. That's one reason no one seriously thinks the world is going to wake up some day and find itself fresh out of raw materials.

Supply is especially changeable. Almost any quantity seems attainable if the price is high enough—witness the speed with which uranium turned into a surplus commodity.

Another example is columbium. In 1952, the U. S. faced a serious shortage. The government did two things: It posted a guaranteed price twice as high as the going market quotation, and it set engineers to designing away from this metal. Result: Today, columbium is plentiful.

• **Waiting for Bids**—Then, too, a scarcity reflected in price rises can put untapped reserves into production. The world still has only a hazy idea of its raw material resources. Whole continents have scarcely been scratched—Africa, for example.

Large new reserves are continually coming into the market. This month, Cerro de Pasco Corp. and three other mining companies begin working a giant new copper body in Peru (page 142). Huge reserves of iron ore, lead, and zinc are known to be in the area.

III. Variable Demand

Demand is every bit as unpredictable as supply. Take manganese, essential in steelmaking. The U. S. is poor in high-grade manganese; most has to be imported. Fifteen years ago, the U. S. was producing only 10% of its total requirements. With war coming on, the government pushed research in making low-cost electrolytic manganese from domestic ores. It succeeded—yet we're now filling only 7% of our total requirements. As supplies increased, so had new uses.

• **Technology Is the Key**—Technology can make scarce materials commonplace, or it can get along without them. It can develop new uses, or it can make the established ones obsolete. It's the key to the problem of keeping materials prices from racing out of control for the long term.

In the case of manganese, for example, technology invented a new demand not only in steelmaking but also in new alloys with properties such as the damping of noise and vibration.

In other cases, technology finds ways to substitute one metal for a more expensive one. For instance, the fact that aluminum can be substituted for copper in many uses puts a ceiling on copper prices. When any material in general use gets scarce and expensive, it retreats into its most essential applications, while other materials substitute for it in everything else.

Moreover, technology can make supplies grow where none grew before. It can cut costs of mining and processing to the point where it is possible and economical to work ores of lower and lower grade—ores that never were seriously counted in supply. And it can



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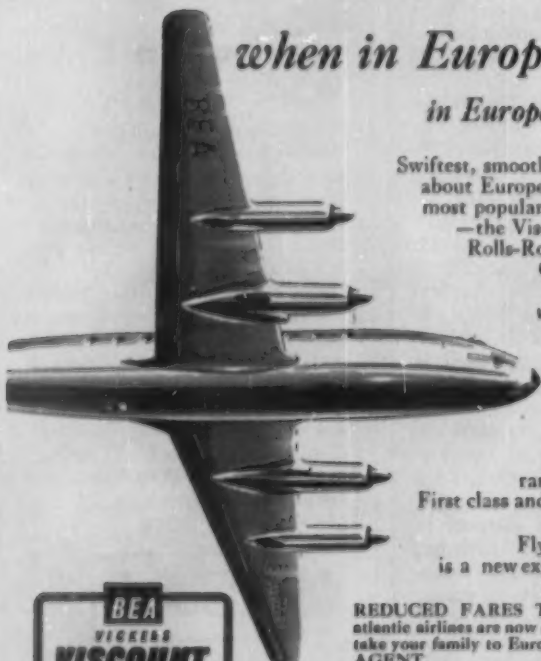
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che out supplies by using them more efficiently—it now takes about 25% less coal, for example, to get a given amount of electric power as it did in 1940. In manufacturing, it can get more value out of the raw material base by processing more fully.

• **Energy Need**—A lot of sleep has been lost over shrinking supplies of fuels: coal, oil, natural gas. But the energy sources are probably in a more comfortable position than the metals right now, thanks to development of the lush Middle East oil reserves and the prospect of energy from the atom and from the sun and sea.

Over-all, there seem to be enough energy sources available to take care of all foreseeable needs. Yet there are severe dislocations. Many countries are still painfully short of the energy they need.

Europe is running out of its low-cost coal and is slowly shifting to higher-cost oil. Industrial atomic power will be welcomed in Europe, but the area's energy costs, already far above those of 20 years ago, will keep rising for many years.

At a primitive stage of energy development, India finds it hard to develop mineral fuels at all. Dr. H. J. Bhabha told the Atoms for Peace conference in Geneva that India gets 75% of its fuel in the form of cattle dung, which is burned at the rate of 80-million tons a year. India has coal, but not where it is accessible. The country needs roads and rolling-stock to get the fuel out to markets.

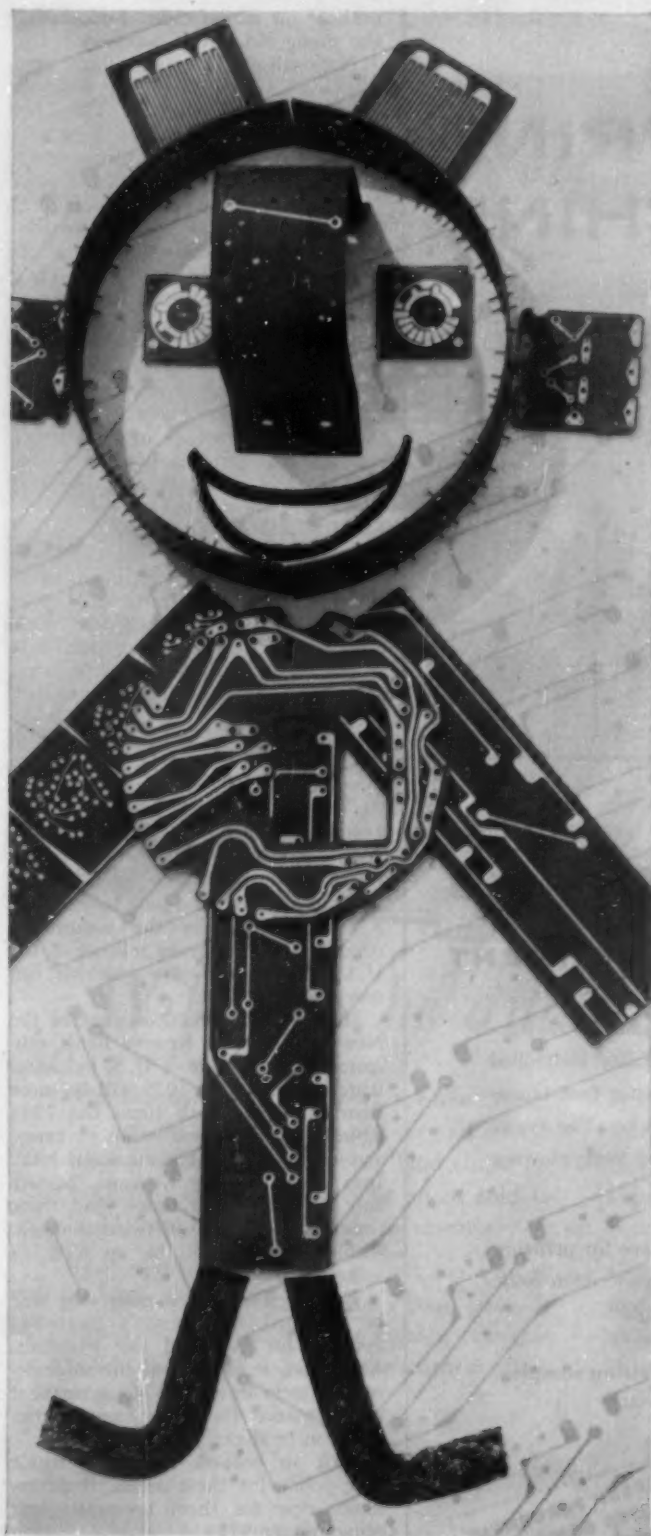
IV. High Policy

The world's wealth of untouched resources is one reason why the phrase "have-not nations" has given way to "underdeveloped nations." But the degree to which these resources are dug out is largely a matter of each nation's policy.

For reasons that are part economic, part nationalistic, the role of raw materials supplier to the world doesn't intrigue the countries that have the resources. They say they don't want to become over-dependent on the world's pricing of their commodities; they would prefer to build up their own industry in defiance of the traditional economist's view that each nation should do what it does best.

• **Economics**—Advocates of local industry in such countries use economic arguments, too. Prices of manufactured goods fluctuate less than those of raw materials, they say, and manufacturing adds value to the nation's materials, generating more income than selling the bulk commodities.

Therefore, the argument goes, the way to grow fastest and get the highest possible return on investment is to con-



While he looks all of a piece, this gentleman's components come from a variety of electronic devices pertinent to defense and private enterprise. Circuits were all made in Minneapolis.

Push button giant

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centrate on manufacture, force-feeding the young industry if necessary.

• **Nationalism**—The nationalistic arguments are equally impelling to many underdeveloped countries. They boil down to this: Two-thirds of the world's population are tired of being merely the tillers of soil and hewers of wood for the other, more fortunate one-third. A steel mill in Latin America may have small economic justification, but it can be a source of real national pride. There are other kinds of income besides economic.

• **Imbalance**—These are reasons why manufacturing, worldwide, is growing so much faster than capacity to turn out raw materials. Some gap is to be expected: As technology improves, each unit of raw material yields a higher gain in value, and increasing efficiency cuts waste, hence use, of base materials.

Still, the widening of the gap shows up in the long-term rise in raw material prices in relation to manufactured goods prices. Scanty data suggest that world prices of manufactured goods have about doubled since 1938, while prices of raw materials, including food, have nearly tripled.

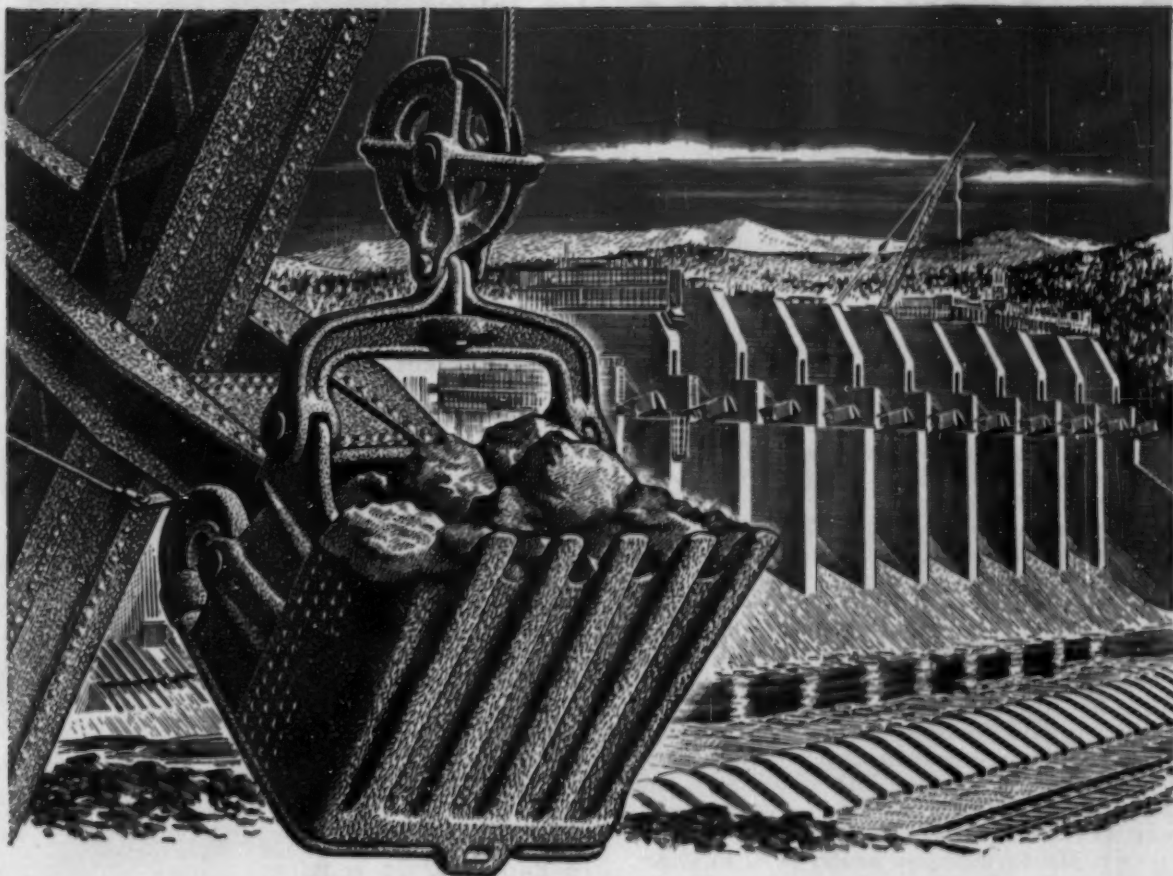
This is the source of the pressure on underdeveloped countries to ease up on their forced development of industry and get into the more profitable business of exporting raw materials. It's a shift that looks more or less permanent, for the conditions promise to remain unchanged for a long time.

• **U. S. Buying**—For the commodity countries, the increasing reliance of the U. S. on imported raw materials can only be good news.

Henry G. Aubrey, economist of the New York Federal Reserve Bank, estimates that the value of U. S. industrial material imports in 1975 will be more than two and a half times the 1948 figure. Petroleum will be up 11 times, accounting for the highest dollar total. Iron ore will be up 15 times; bauxite and aluminum, four times; zinc, three times as much; copper, twice as much. Rubber imports will be up 69% in value; lead, 53%.

• **Europe, Too**—These gains may well be matched by Europe's increasing appetite for industrial raw materials. Altogether, it looks as if the underdeveloped areas are assured of a permanent seller's market for all the commodities they can produce.

Such an outlook suggests a whole new policy for these areas. It makes more sense for them to boost their economic growth by inviting foreign investment, pushing raw materials production and export, then using their earnings to develop their own industry. In the end, the economics of the new commodities situation may outweigh nationalism. **END**



Will this be another "blue chip"?

The new dam, the new airport, the new bridge, the new turnpike, the new garbage and sewage disposal plant. Will they be "blue chips" or not? Will the bonds that have to be sold to build them be sought eagerly by investors?

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Lumber Prices Wobble More Than Seasonally

Lumber prices in the Northwest began to drop in late August, and have been weak ever since. Currently the price of a leading grade of green fir is around \$70 per 1,000 bd. ft.—some \$10 to \$12 under high summer levels—with some sales reported even lower.

Lumber prices are highly seasonal. Some weakness in the fall is normal, with prices usually reaching their lows in late November or December. Partly this is because building in the East and Midwest slacks off with cold weather, partly because yards don't want much inventory on hand at tax-time, come Jan. 1.

But the extent of the present drop has caught lumbermen by surprise. Prices are just about where they were a year ago, erasing most of the gains of the past boom year.

An ominous note is that the weakness has been especially marked in the kinds of lumber used in homes. The larger sizes, requiring a better grade of logs, and used more in industrial and commercial construction, are much firmer in price than the green fir dimension lumber that goes mainly into the framing of houses. Kiln-dry lumber, which goes into finish work in houses, is produced mainly by the larger mills and is always steadier in price. Last week, however, Washington mills dropped the price of kiln-dry dimension lumber by \$2 to \$3 per 1,000 bd. ft.

Log prices are still high, about \$10 per 1,000 bd. ft. above a year ago. With lumber falling, mills are reluctant to lay in their winter supply of logs. There is also talk that, with log prices as high as they are, some mills will shut down if the market goes much lower.

• • •

New Seed Boosts Yield Of Sugar Beets; Stirs Controversy

This week sugar beets grown from a new seed are being harvested in test areas with excellent results. The new seed is causing a good deal of excitement in the industry; since it grows a single plant from a single germ—instead of the multi-plant—it will save costly thinning and mean a much higher yield. Observers feel sure it will be in wide use within two seasons.

Even without the new seed, sugar beet yield per acre is up some 25% since 1948. And this growing yield is one of the chief factors behind the fight on sugar legislation that's coming up in the next session of Congress.

Under the current law, the Sugar Act of 1948, domestic beet and cane growers can market only the same fixed amount of sugar year after year. The difference between this fixed amount and actual consumption goes mainly to Cuba.

With increased yields, and a ceiling on how much they

send to market, growers have found their acreage cut back. And, understandably, they want something done about it.

Last year sugar beet acreage was 10% under 1947, and production was 14% higher. Acreage was trimmed again this year—and the outlook is for another jump in yield.

Now the new seed, with its promise of still higher yield per acre, will increase the pressure behind getting a change in the law. Domestic producers want their quotas established on a percentage basis, instead of in fixed tons, so that they can share in the normal growth in the market that comes with increased population.

• • •

Coffee Market Perks Busily As Brazilian Worry is Deferred

The coffee market is humming with activity.

Last week's announcement that there would be no change in Brazil's coffee policy until the new administration takes office—which won't be until next January—lifted a lot of uncertainty from the market. Before that the trade had been expecting, from day to day, to hear of devaluation in Brazil, and had bought as little as possible while waiting for lower prices.

Now demand for green coffee is high and prices are firm. Coffee consumption, which has picked up sharply, is due to go still higher as it heads into its big season.

• • •

Zinc Prices Rise Again, To Reach 13½¢ a lb.

Zinc prices moved up another ¼¢ this week, to 13½¢. This is the fourth increase this year, and brings zinc more than 4¢ a lb. above its low point early last year, before government stockpiling came to the rescue.

Zinc demand is high now, especially for the diecasting grade. With producer's stocks down to their lowest level since early 1952, offerings to the stockpile have slowed to a trickle.

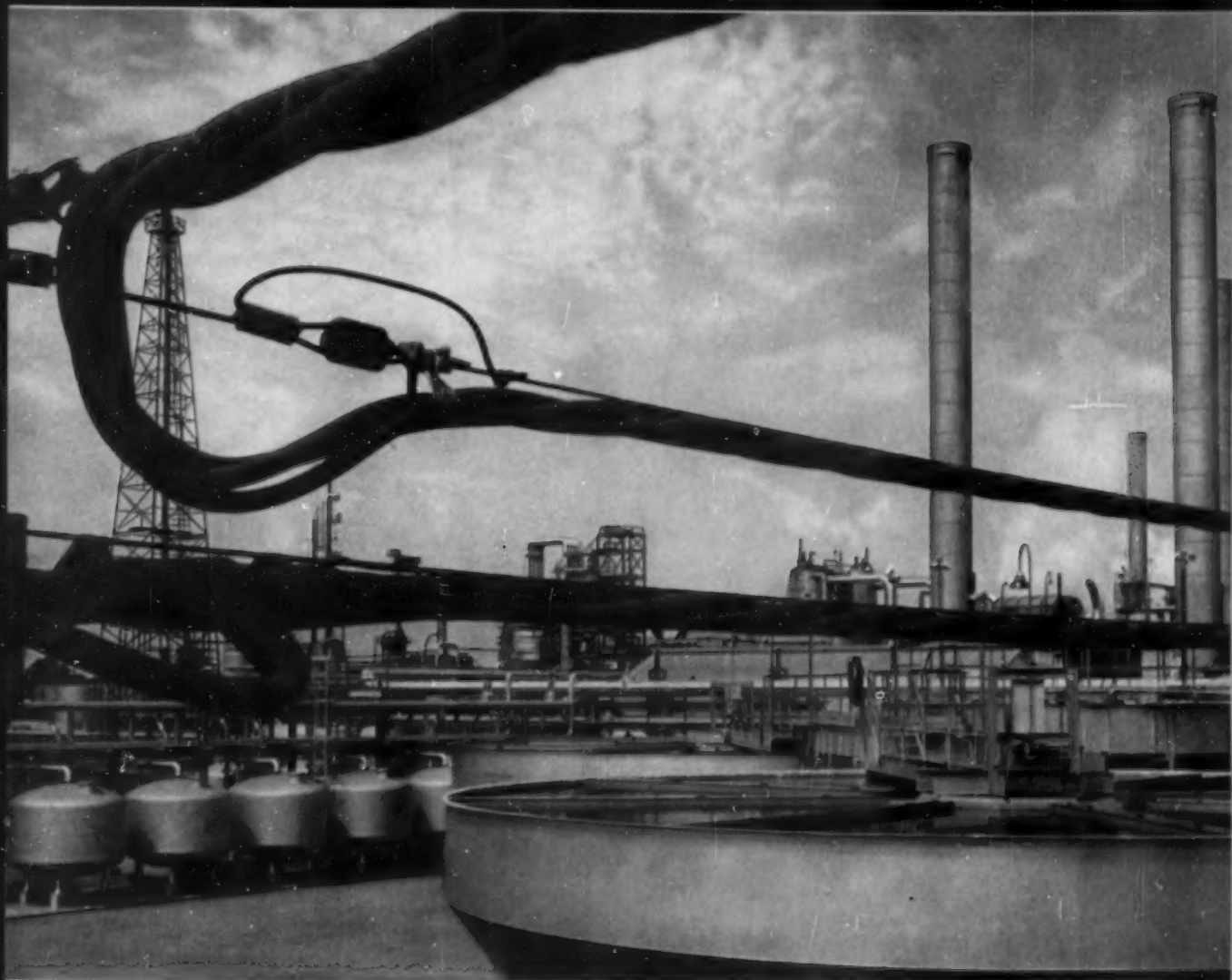
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Commodities Briefs

Small hope for nickel users: Interior Secy. Douglas McKay says he expects the nickel shortage, which has been hurting for some time, to continue through the end of next year. Office of Defense Mobilization ordered another 2.5-million lb. diverted to industry this month, bringing the total for the year to close to 16-million lb.

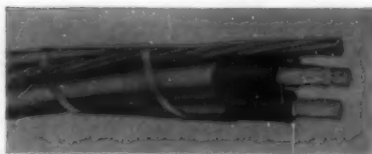
Meat—all kinds of meat—is selling at bargain prices. Hogs, cattle, and lambs are all rushing to market; oversupply has prices of all three down to their lows for the year.

Cotton growers vote in mid-December on still stiffer acreage controls and marketing quotas. Bumper yields are making acreage controls meaningless; though this year's acreage was chopped 14% under 1954, the cotton-crop will be 2% higher according to the latest estimate.



PROGRESS THROUGH ANACONDA METALS

The cable that beats its worst enemy—ozone



Self-supporting high-voltage aerial cable

THE PROBLEM: One of the secrets of the great productiveness of the American worker is the vast electric energy available to the machines he uses. To use electric power most economically, more and more often high-voltage cables are brought right into the plant. Where 120-volt service is adequate for your home, industry uses 5,000 or 15,000 or even higher.

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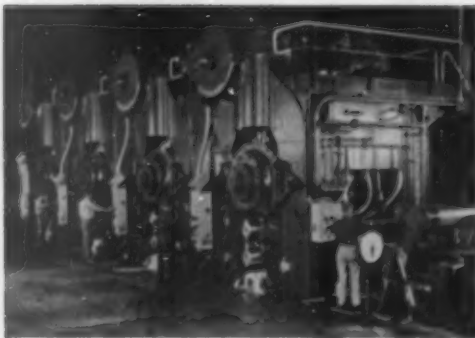
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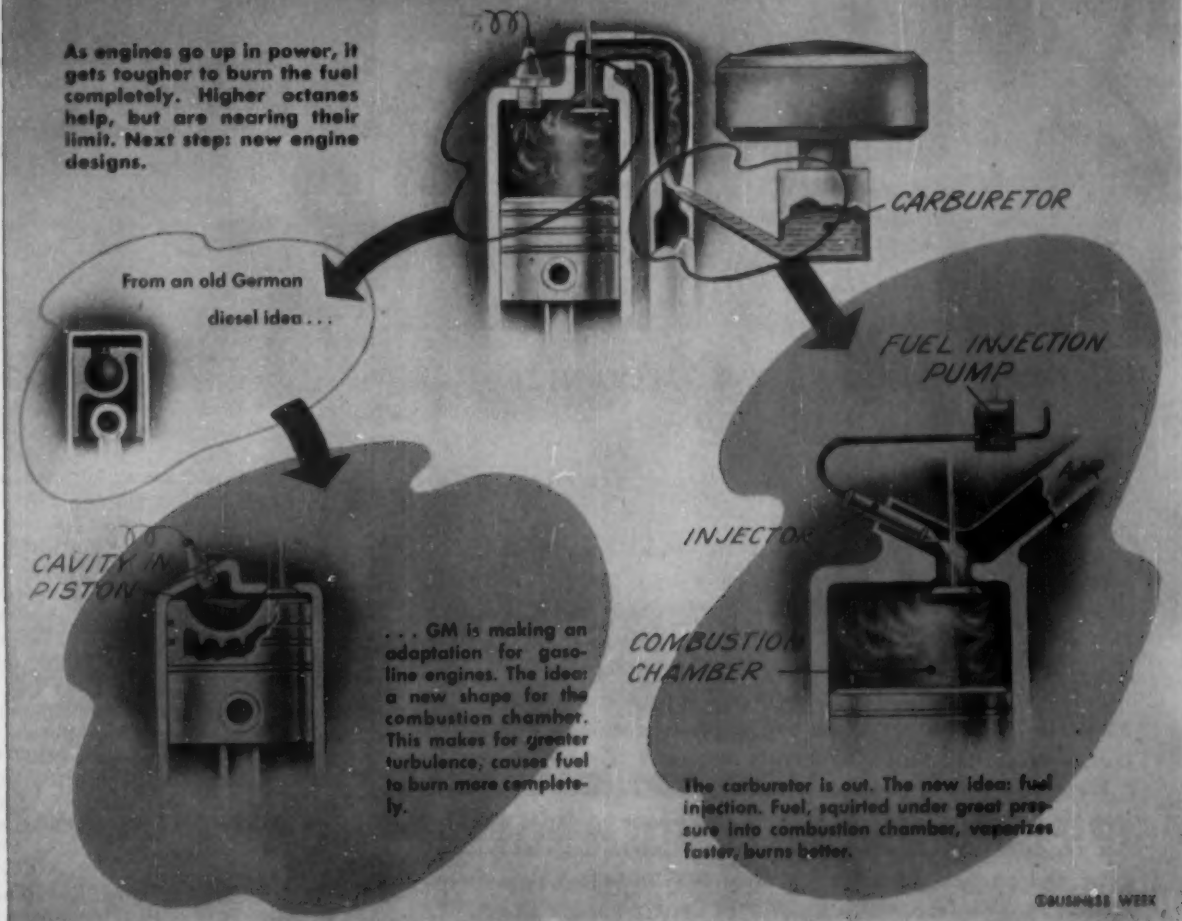
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AUTOMOBILE ENGINES: New Changes Coming Soon

As engines go up in power, it gets tougher to burn the fuel completely. Higher octanes help, but are nearing their limit. Next step: new engine designs.



What to Do Until Turbine Comes

Detroit will not give up on the gas turbine engine. By 1960, it is quite probable that 60,000 turbine-driven cars will be on the road (BW-Apr.2'55, p134). But there is a more immediate problem for the automobile industry: what to do with today's piston engine until the turbine engine is ready?

Today's piston engine is the most efficient automobile power plant yet known. But the demand for more and more power is insatiable, and engineers in Detroit will have to do some tinkering with it between now and 1960 to keep up. Each manufacturer feels he must keep moving forward to retain whatever competitive edge he has.

Over the past few years, the industry has simply boosted power, bit by bit. Since 1947, average maximum brake horsepower for all passenger car models

has jumped from about 108 to around 175 (BW-Dec.4'54,p70). Partly, this was a new sales gimmick—Sell More Power. But it was also a necessity, for in 1947 the new models began to pick up such gadgets as automatic transmission, power brakes, air conditioning. All need power.

• **Where to Get Power?**—To make engines more powerful, the engineers began to increase engine compression ratios. Compression ratio tells how many times the volume of gas vapor and air in the engine's combustion chamber is compressed before it is ignited. Since 1946, compression ratios have gone from 6-to-1 up to 8½-to-1 in some of this year's models. And as compression ratios have gone up, so has power.

The petroleum industry had to tag along. An engine with an 8½-to-1 com-

pression ratio cannot operate on the same fuel that a less powerful engine would take. So octanes ran up too (BW-Feb.26'55,p66), from 85 in 1947 to around 95 this year.

• **End of the Line**—But neither compression ratios nor octane numbers can go much higher. At the high levels, you gain less with each successive step. That's why the auto industry is doing serious work with such ideas as fuel injection and reshaped combustion chambers (sketches).

Some of these ideas are almost certain to be introduced as optional equipment on certain Big Three 1957 models. Here's the way developments now in the works are stacking up.

• **Fuel Injection**—Car manufacturers are testing a variety of fuel-injection systems, with no firm decision yet ap-

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parent on which one will win out. There are two basic kinds of fuel injection. Both eliminate the carburetor.

In one type, the continuous flow system, production costs are low; but—so far—engineers have had trouble with it when they took cars into city traffic. The heart of this system is an electric-motor-driven fuel pump. This is either submerged in the gas tank or located near the tank below the fuel level. When the engine is idling, or when the car is decelerating, less current is fed to the motor that drives the pump. The pump then operates at a slower speed; the flow of fuel to the engine is reduced. When accelerating, the electric motor speeds up and the engine gets a richer mixture.

The second type, the metered injection system, costs more than the continuous flow system. That's because, in addition to the fuel pump, you need an intricate metering pump to supply individual amounts of fuel to each cylinder for each stroke for the piston.

Both systems force fuel, under high pressure, into the combustion chamber. Today's carburetor (sketch) admits a stream of gas and air into the cylinder's intake manifold; when the piston moves downward, this mixture is pulled into the combustion chamber. The immediate advantage of fuel injection: By forcing the fuel under high pressure into the combustion chamber, the fuel is splattered into tiny particles—much smaller than with a conventional carburetor system. This means better vaporization of the fuel, and better combustion within the cylinder. Some engineers say that fuel injection will yield a miles-per-gallon boost of from 5% to 15%.

• **But There Are Problems**—Though continuous flow injection holds the edge on price at present, it might lose out to the metered injection system later on. One reason: Continuous flow presents many problems in low-speed operation.

Metered injection works well. But the price is one big drawback. To install this system on a custom basis on a single car today might cost \$600. As optional equipment on a limited production basis the cost would be about \$250. In mass production, the metered system would cost the auto maker around \$100. Cost of the whole carburetor system on today's car averages around \$75.

• **How Much?**—Ford Motor Co. came very near to offering fuel injection as optional equipment on the 1956 Lincolns and Thunderbirds. But at the last minute, it backed off.

There is agreement that once fuel injection is introduced, the public will take to it and the carburetor will be doomed. At least, many Detroit engineers see that coming, though some



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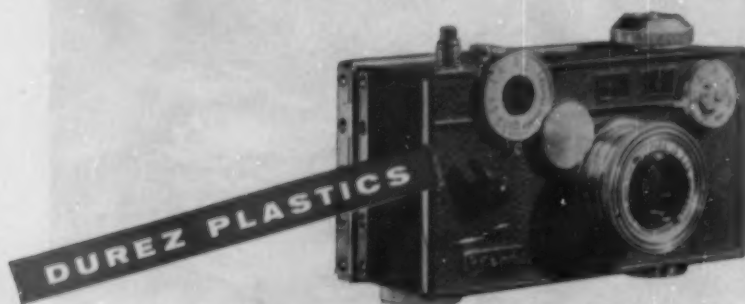
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still have their own qualms about fuel injection. For example, a General Motors' engineer says that the gasoline fuel injection has not been perfected to the point where it is more economical for the car owner. However, he believes that if sales departments think it will help sell more cars, we will probably have fuel injection even though the carbureted piston engine still costs less to build and is less expensive to operate.

One possibility: Fuel injection offers a chance for a style change. Since it takes up less space than the conventional carburetor, the hood line can be lowered by 6 or 7 in. If such a style change provides increased sales appeal, the carburetor will be junked.

American Bosch Arma Corp., in tests of a new fuel system for gasoline engines, finds fuel injection provides from 10% to 12% more horsepower at full throttle. Results of its experiments also indicate another decided advantage in better mileage per gallon.

American Bosch sees a possibility of even greater gains in horsepower output—perhaps as much as 25% more—by improving present design.

• **Combustion Chamber Design**—Many auto engineers are already toying with new combustion chamber designs for getting more efficiency. Some designs under consideration involve minor changes in shape of the chamber in the engine head. Others go so far as to move the chamber down into the piston.

Well-known in Europe for about 20 years, the Maschinenfabrik Augsburg-Nuernberg diesel engine has provided U.S. engineers with a new slant on the question of design. The MAN engine uses fuel injection, with the fuel forced into a chamber that is wholly within the piston. It's also a multi-fuel type engine equipped to operate on gasoline, almost all grades of diesel fuel, kerosene, purified crude—even used crankcase oil.

How MAN design principles are being applied in the U.S. on gasoline engines is indicated by a patent issued to Archie D. McDuffie, of General Motors' research group. The McDuffie combustion chamber design enables the engine to operate on low octane fuel (80-octane), by promoting faster and more complete burning of the fuel.

One automotive engineer believes the MAN engine more or less bridges the gap between diesel and gasoline engines. It may also be a prime factor in speeding up the use of fuel injection in all piston engines.

Through new combustion chamber designs, better engine performance and efficiency is anticipated without the necessity of improving fuel quality. In other words, every mechanical octane

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built into an engine by virtue of its design is one that the oil industry will not have to add chemically to its fuel.

• **Two-Cycle Engines**—Another possibility for the auto makers—though not a likely one—is the two-cycle diesel engine. Periodically since its introduction by General Motors some 20 years ago, auto men take another look at this, and they have been doing it again recently. The two-cycle engine provides about 40% higher output than a four-cycle engine of the same number of cylinders. But it has one big disadvantage: It requires expert maintenance to get a smooth operation.

• **Gas Turbines**—Long-range, of course, the gas turbine is likely to outpace all these piston engine developments; and it's already receiving much attention from Ford, GM, Chrysler, and others. A. A. Kucher, director of Ford Motor Co.'s scientific laboratory, fully expects the automotive gas turbine to be here by 1960 and to be on the road in large numbers by 1966. Using only about 10% to 15% more fuel at speeds of 20 mph. to 40 mph., the gas turbine with heat regenerator now approaches the efficiency of the piston engine.

Chrysler is piling up the miles on its turbine-powered 1956 Plymouth. Certain metallurgical problems have already been solved, and the company has hopes of licking the remaining problems.

Cost is one great hurdle. To make the automotive turbine practical, the cost must be reduced from somewhere around \$15,000 today to \$200. Some progress had been made by using aluminum in the turbine wheels instead of more expensive materials such as nickel or chrome.

There's much speculation that the eventual turbine car, instead of being a strict turbine, may be a combination of a free piston engine and turbine. The exhaust from the free piston engine would turn the turbine, thus eliminating need for a compressor or combustion chamber for the turbine (BW-Mar.27'54,p102).

• **And Beyond**—Far off in the future, automobile dreamers view atomic power and solar power as not-to-be forgotten possibilities. Ford Motor Co., for example, now under contract with the Atomic Energy Commission to study reactor fuels, has a vital interest in all new energy sources, including nuclear energy. But the atomic car is many, many hours of research away.

General Motors added to automotive speculation by introduction of its sunmobile at the Powerama in Chicago in September. Solar power seems quite remote, however. The energy the sun delivers to 1 sq. yd. of land in 24 hours would convert into 1 hp. Today's car has about 6 sq. yd. of exposable surface; at most about 6 hp. could be converted from the sun's energy. **END**

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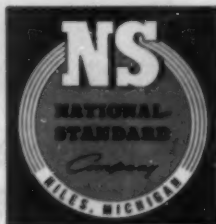
• There's a tell-tale pattern on the back of a leading brand of hardboard. It was left there by a *new* kind of wire cloth, developed by the *Reynolds Wire Division* of National-Standard—developed because their customer had a problem which, as usual, Reynolds solved.

In this hardboard manufacture, wire cloth carries the heavy wet compound, supports the material during pressing, and pulls out the hardened boards, while being stripped away from the big boards by force. The stress is terrific! In fact there *was* no wire cloth that would hold up. It failed too often, requiring frequent

replacement, slowing production and adding to costs.

But now all that is past . . . because Reynolds tackled the problem and came up with a radically new cloth construction. So unusual was the cloth that Reynolds even had to build special looms to produce it.

Here again is an example of the lengths to which Reynolds *often* goes to help customers save money, produce better products, or both! But problem or no problem, if you *use* wire cloth, or want to check on its use, you'll find Reynolds' kind of service and cooperation always pays off. Try us and see.



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Here Is Weight-Saving, Money-Saving *The New* **Firestone TUBELESS** Is Standard Equipment on 1956 Trucks . . . And

A NEW DAY is dawning for truck owners because America's leading truck manufacturers have adopted Firestone Tubeless Truck Tires and Firestone One-Piece Drop-Center Rims as standard equipment for over-the-highway trucks.

When tubeless truck tires were first offered to truck manufacturers, several multi-piece rims were suggested which did not provide maximum weight-saving and money-saving advantages. Firestone, world's largest manufacturer of truck rims, would not accept old conventional constructions and invested millions of dollars to develop a practical, one-piece drop-center rim that would provide the utmost weight-saving and money-saving advantages.

Truck manufacturers subjected these various

rims to severe and exhaustive tests. The new Firestone Tubeless Tire and One-Piece Rim combination proved to be so outstanding that it was adopted by the Tire and Rim Association as standard for the industry.

The precision-engineered Firestone Tubeless Truck Tire and One-Piece Rim combination provides greater safety and gives longer mileage than the conventional tire and tube assembly. It is simple to mount and demount, has a positive air seal with no parts to wear out, break or cause air loss, and there is no danger of side ring blowing off. The cured-in Safety-Liner clings to puncturing objects, preventing loss of air. This greatly reduces road service calls and losses from damaged tires. And above all, it gives

THE FIRESTONE TUBELESS *Offers These Weight-Saving, Money-Saving*



1. WEIGHT-SAVING

The Firestone Tubeless Tire and one-piece rim combination gives truckers more payload capacity on every size tire. As an example, it saves up to 162 pounds per axle using 11-22.5 tires on disc wheels, 121 pounds using 11-22.5 tires on cast wheels. 11-22.5 is the tubeless replacement size for the conventional 10-00-20.



2. MONEY-SAVING

Blowouts and puncture protection . . . The Firestone Tubeless Transport with its Safetyliner eliminates the dangers of punctures and blowouts which result from pinched or chafed tubes. The Safetyliner clings to puncturing objects, preventing air loss. Greatly reduces road service calls, downtime, and loss from run flat and damaged tires.



3. SIMPLICITY

The Firestone Tubeless Truck Tire and rim is a simple two-piece assembly consisting of a tire and one-piece rim compared with the conventional assembly of five or six pieces. The new Firestone Tubeless Truck Tire assembly gives a positive air seal with no rim parts to spring, break or deteriorate with age, causing service failures. It is simple to mount and demount and provides maximum savings in tire servicing labor costs.



4. SAFETY-TENSIONED GUM-DIPPED CORD BODY

Exclusive Firestone Safety-Tensioned Gum-Dipping takes the stretch out of truck tire cords. This results in elimination of tire growth and tread cracking, greater resistance to impact breaks, longer life and more money-saving retreads.

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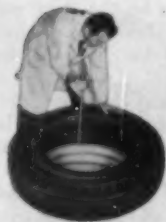
After millions of miles of testing, truck manufacturers also found that the wider, flatter Firestone Five-Rib Gear-Grip Tread gives longer non-skid mileage and more traction life; and the Safety-Tensioned Gum-Dipped Cord Body eliminates tread-cracking and tire-growth and permits more retreads.

Yes, Firestone, the Pioneer and Pacemaker, has set the pattern for the design and manufacture of the revolutionary new tubeless truck tire and one-piece drop-center rim.

And all America will benefit, because the great trucking industry will be able to serve you better than ever before with faster delivery and greater economy.

TRUCK TIRE

Advantages



5. SAFEST TRUCK TIRE EVER BUILT

The new Firestone Transport Tubeless Tire is the safest truck tire ever built. There is no danger of side rings blowing off and injuring service people. The tire cannot run off the rim. It gives the maximum in safety.



6. LONGER TIRE MILEAGE

The Firestone Tubeless Transport's Five-Rib Gear-Grip tread gives longer non-skid tread mileage. Because of cooler running and tougher tread compounds, the Firestone Tubeless Transport will give longer original tread mileage and more retreads per tire. You cut tire cost with longer original tread mileage and more retreads per tire.

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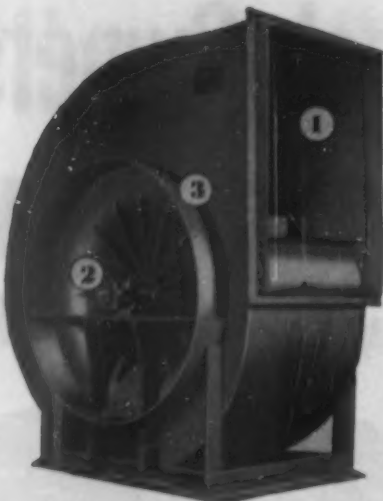
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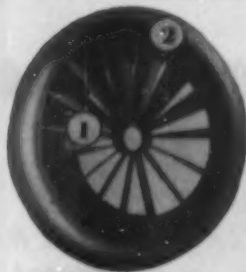
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Bow for Darlan

It's Goodrich Chemical's new man-made fiber, and it's going first into fur-like women's coats.

What started out several years ago as a possible new material for strengthening tire fabrics made its commercial bow this week as a new synthetic fiber for use in women's luxury pile coats of the soft and sinuous fur-like variety (BW-Sep.10'55,p58).

The new fiber has been christened Darlan. Its maker, the B. F. Goodrich Chemical Co., bills it as a "man-made fiber different chemically from any now on the market." Goodrich's Pres. John R. Hoover says it's in pilot plant production at Avon Lake, Ohio.

Deep-pile coats made of Darlan will be introduced in a number of retail stores across the nation later this fall. Hoover adds that it can be adapted for almost every type of wearing apparel from sweaters and knit goods to dresses, coats, and suits.

• **Birth**—Darlan's history goes back to the period just after World War II, when Goodrich Chemical began functioning as a separate organization in Cleveland. Darlan is a dinitrile fiber. The dinitrile chemical (vinylidene-dinitrile) had been known as a theoretical material ever since World War I.

In working with this chemical, Goodrich was looking for a new polymer that would lead to a new and improved tire fabric material. What its researchers developed was a material that they named Zetek, and that they believe to be the third polymer for synthetic fiber ever produced in this country (Nylon was the first, Neoprene the second).

But it soon turned out that Zetek had much more value in textiles than it would ever have in tires. It was found to have qualities not possessed by other synthetics. It is soft as eider down, static free, and in a woman's coat it takes a drape like the most expensive natural fur.

• **Growth**—So from the test tube stage, the fiber was moved to Avon Lake, where manufacturing methods were perfected over the past three years. The new name, Darlan, was chosen after a careful market survey.

Goodrich selected George W. Borg Corp., maker of Borgana pile coats (BW-Sep.25'54,p192), to make the fabric for Darlan coats. Because of the quality of the material and other characteristics (it can be dry-cleaned numberless times), the coats will sell at a premium price. **END**



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Tryout for New UHF Medicine

Scranton station, proposing a dose of self-help for ultra high frequency, plans setup that would test out signal strength and coverage, fill a big gap in UHF knowhow.

What to do about TV's problem child—the ultra high frequency segment of the industry—is a subject that is currently furrowing the brows of the Federal Communications Commission, trade groups, engineers, and a Congressional committee. UHF's chief ailment is economic: For each very high frequency station that hasn't made the grade financially, six UHF stations have turned their licenses back to FCC.

While the pundits ponder, a successful UHF telecaster proposes a strong dose of self-help. Station WGBI-TV in Scranton, Pa., is asking FCC this week for more power and a higher antenna. An FCC nod would give it greater power than any existing TV station—but that's only part of the story.

- **Pioneer**—Approval would also enable WGBI to pioneer in measuring the strength and coverage of the UHF signal under varying transmission setups. By making the resulting data available to the industry, WGBI would fill a big hole in UHF's knowledge of its own possibilities.

This isn't WGBI's only pioneer effort. It has also come up with a plan to help local TV stations exist without network affiliation; it proposes to help establish in two nearby towns "associated" stations that would rebroadcast networks shows for which it holds the franchise (BW—Oct. 15 '55, p140).

- **Troubles**—UHF has been operating only since 1952, but its short history has been full of troubles. These stem from a variety of causes, among them:

- UHF hasn't enough data on the area its signal can reach.

- It's harder to produce a good signal at UHF frequencies.

- TV sets need an adapter to receive UHF telecasts.

- **Scranton Plan**—While industry and government are studying general remedies for UHF's ills, WGBI proposes to try to find "one station's solution"—but one that would also guide others.

Scranton Broadcasters, Inc., which operates WGBI-TV, also has FM and standard radio stations. WGBI-TV now serves a rugged, mountainous area of about 1-million population, using 250,000 watts power.

Specifically, what WGBI-TV is asking from FCC is authorization to put up a new antenna 240 ft. higher than its present one, and install a pair of 23-kw. transmitters to give a total output of 45 kw. The new antenna would

also have two sections. The two sections would work together to provide an antenna gain of 50, or separately for a gain of 25 (that is, would multiply the transmitter power by 50 in the one case, by 25 in the other).

- **Experimenting**—By feeding the full power output of the transmitter to the complete antenna, WGBI could operate at 2-million watts—twice the maximum now allowed by FCC for a UHF station. It proposes to operate alternately at the 1-million watt maximum and at lower power—500,000 watts and below. The station also wants to broadcast experimentally at the higher power.

It proposes to go further in experimenting, too, by using the transmitter and antenna sections in different combinations. It can get 1-million watts either by using the power of both transmitters with half the antenna, or the power of one transmitter with the complete antenna. It can make similar shifts when operating at 500,000 watts.

WGBI will have metered devices at various distances along lines fanning out like spokes from the transmitter, to measure signal strength. This may determine for the first time exactly what the coverage is for various powers, and just what UHF requires in mountainous country.

- **The Answers**—WGBI's measurements should also help to answer a question on which the big manufacturers of UHF equipment are at odds. In general, a low-gain antenna gives you a beam shaped like a thick pancake. With a high gain, the pancake flattens out. The question is whether you get better results with a high-power transmitter plus low-gain antenna, or with a low-power transmitter plus high-gain antenna. General Electric (which is building the WGBI equipment) recommends the first setup, Radio Corp. of America the second.

Pending the results of the experiment, WGBI suggests delay in a proposed raise in the UHF power ceiling from 1-million watts to 5-million (which only well-heeled stations could afford). The experiment, it hints, might show such a big raise unnecessary.

WGBI itself will have some solid benefits from its \$400,000 outlay—improved signal strength, a wider market, and a hedge against future power requirements and equipment breakdown. Pushbutton controls will permit a 30 sec. switchover from one antenna-transmitter combination to another. **END**

HOW TO GET ALONG WITH YOUR LATHE OPERATOR'S WIFE



A suggestion

Ask your foremen what are the most tiring jobs in their departments. Then phone your local Bellows Field Engineer (he's listed in your phone book under The Bellows Co.). Ask him how Bellows "Controlled-Air-Power" can remove the fatigue from those tiring jobs.

Bulletin CI-50 (free on request) describes Bellows devices — and tells how they are used. Write: The Bellows Co., Dept. BW-1035, Akron 9, Ohio. In Canada: Bellows Pneumatic Devices of Canada, Ltd., 14 Advance Road, Toronto.

Executives interested in pleasant labor relations would do well to talk to the wives of their employees. They would learn that a tired worker makes a grouchy husband; a grouchy husband, a discontented wife. And the effect of "family" trouble on your production can be a serious matter.

Operator fatigue resulting from repetitive manual movements can be quickly reduced in an almost unlimited number of jobs with Bellows "Controlled-Air-Power" Devices.

These versatile, inexpensive, power units can perform almost any repetitive manual motion faster, safer and better than your most skilled workman. They feed work to tools, tools to work; open and close work holding devices; position and eject parts with speed and accuracy. They are easily installed on lathes, drill presses, tapping machines, milling machines, grinders, etc. They can form the "heart" of countless special purpose machines you can build in your own plant.

Not only will these versatile devices end "fatigue" problems in many of your operations, but they will enable any operator to produce more — at lower cost.

The Bellows Co.

AKRON 9, OHIO



REST-ALL
STRAIGHT CHAIR
NO. 1168

... THAT WON SELECTION FOR THE FABULOUS NEW BEVERLY-HILTON HOTEL

Rest-All Aluminum Straight Chairs and Posture Swivels are luxurious beauties, every inch—along with their notably long-lasting, low-cost durability. They are seen at the Hotel Roosevelt, Palmer House, Dechler-Hilton, Schenley and many others. The same features that won this type of selection are ready to serve you best in your business. Write for literature.



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In Production

• • •

Philadelphia Junks Its Ban

On Nut-and-Bolt Construction

Philadelphia shook off some of the shackles of an old outdated building code last week. On Monday, workmen started putting together the frame of the Penn Sheraton Hotel; they were using nuts and bolts, instead of the rivets that had been required for years to clamp together the city's structures.

In the past three years, most cities have scrapped their insistence on rivets (BW—Aug. 13 '55, p140). Bolting was accepted because it's faster, and frequently cheaper. Also bolts don't work loose as rivets do.

Until last week, Philadelphia had stubbornly held out, along with New York and Boston. And these two final survivors are expected to yield before the year is out. Already, New York has waived the no-bolt rule on one building.

Nut-and-bolt construction has been gaining fast. In 1952, less than 2% of all structural steel was bolted together. This year the figure will be 15%. And by 1960, most construction engineers believe that the nut and bolt will be out ahead of the rivet.

• • •

Uniform World Code Sought

For Chemical Warning Symbols

The symbols used to warn against hazardous chemicals are in a mess. Too many organizations have evolved their own symbols to warn against the five categories of peril: explosive, flammable, poisonous, corrosive, radioactive.

Now U. S. chemical manufacturers want to set up a uniform code. Next week the Manufacturing Chemists Assn. is sending two labeling experts to negotiate in London and Geneva with British and Belgian chemical makers and with the International Labor Organization.

The idea is to systematize the separate codes now used by the I.L.O., the United Nations, and the International Air Transport Assn., among others. In these existing codes, some symbols coincide but others conflict.

If all hands can agree at next week's meetings, the uniform symbols they evolve will come up for approval in the U. N. next year.

• • •

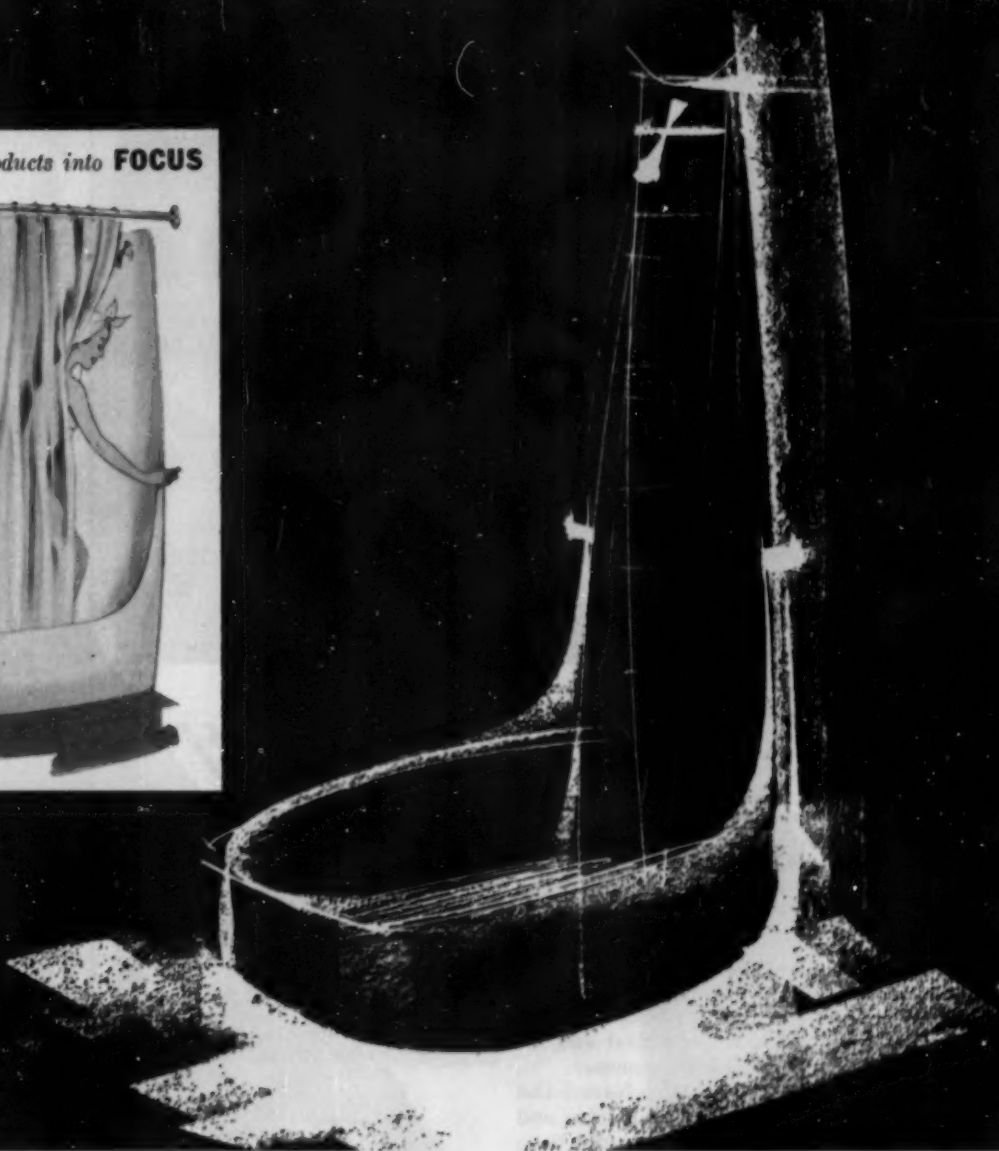
Union Carbide Coppers Its Bets

On "Super" Polyethylene

The plastics industry is doing a lot of speculating over "super" polyethylene this week. On Monday, Union Carbide & Carbon Corp. surprised everybody when it said that it had made an agreement with Phillips Petroleum Co. for a license to make Phillips' low-pressure polyethylene, Marlex.

For months, it has looked as though Carbide—the world's largest polyethylene producer—was all set for "super" polyethylene production, using a different process. The company had been licensed since early in the year to use the better-known Ziegler process,

Bringing new products into **FOCUS**



Could a low-cost shower-tub find a market in millions of homes and summer cottages?

MANUFACTURE OF SUCH A UNIT IS POSSIBLE WITH REINFORCED PLASTIC!

With the number of home-dwelling Americans increasing every year, the need for additional bathing facilities is becoming increasingly acute.

It seems likely that a tub and shower that is low in cost and easy to install could help solve the problem.

It could create an auxiliary unit for home basements or attics. It could improve the conveniences of millions of summer cottages.

The ideal material for such a combination tub and shower is at hand. By using fibrous glass, bonded with polyester resins, the unit could be easily molded in one piece.

It would be light in weight, smooth in finish, compact in design and colorful in appearance. The water could be brought up to the shower head through pipes

which also serve as structural members.

The uses of reinforced plastic materials are growing every year. They are already widely applied to sports car bodies, boats, corrugated building panels, modern furniture, air conditioning ducts.

The basic ingredients for manufacturing polyester resins are supplied by Monsanto. These include Monsanto styrene monomer and phthalic and maleic anhydrides.

If you would like a glimpse of other possible new uses for reinforced plastics, you are invited to request "A Sketchbook of Profitable Products." Write on your letterhead to Monsanto Chemical Company.

Plastics Division,
Dpt. BU-11, Springfield 2, Mass.



SERVING INDUSTRY...WHICH SERVES MANKIND



Boat maker saves 25% In caulking cost

The Aluma Craft Boat Company, one of the world's largest manufacturers of aluminum boats, pays careful attention to every detail of construction.

In assembling these fine boats, they use an air-operated Graco Powerflo Pump to extrude caulking material "direct-from-pail", laying it on the half shells of the boat before they are joined. Application is fast and accurately controlled for economy.

Formerly, they purchased the caulking material in small tubes and applied it with small hand guns. Now, with a Powerflo on the job, they buy in 5-gallon pails and save 25% in material cost!

If your company uses coatings, sealers, adhesives, or similar heavy compounds, Graco's "direct-from-drum" pumps can mean dollar savings for you. They fit containers from 5-gallon pails to full size drums. Write for your copy of the new Powerflo catalog... it contains 54 pages of pictures and case history data. Ideas for your plant!



At Aluma Craft, they use a special extrusion nozzle, illustrated above, which lays the caulking material out in 5 narrow beads. When considering possible applications, remember that the Graco laboratory will report, without obligation, on the pumpability of any material, plus suggestions for proper equipment. Request this service.

• Graco products are sold and serviced through authorized distributors in all principal U. S. and Canadian trading areas and in 63 foreign countries. Your nearby Graco distributor can give you helpful personalized service. Call him.

GRACO

air-powered
"DIRECT-FROM-DRUM" PUMPS

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GRACO...

Engineers and Manufacturers of air-powered paint circulating systems and heavy material pumps, drum pumps, lubricating and automotive service equipment

which was developed in Germany (BW-May 14 '55, p48). The deal with Phillips is bewildering, because the two processes seem to overlap.

The big question is: Why does Carbide need both? Carbide isn't revealing its reasons, but most industry people believe that the company is simply playing it safe. If Phillips' Marlex turns out to be a better plastic, Carbide wants to be there with a license.

The insurance probably runs high. Some insiders speculate that Carbide paid \$1-million to Phillips for the license. Its payment to Zeigler was much less—maybe only \$100,000.

The Carbide license is a good break for Phillips. Until this week's agreement with Carbide, Phillips had just one licensee—W. R. Grace & Co., a relative newcomer to plastics. Zeigler had half-a-dozen big names linked with his process: Carbide, Monsanto, du Pont, Koppers, Goodrich-Gulf, Hercules.

Now, Phillips has the biggest producer, and there is a strong possibility that Celanese Corp. of America is to become a Phillips licensee, too.

• • •

Allegheny Ludlum Starts Superalloys Drive

Allegheny Ludlum Steel Corp. this week put into action the first part of a two-pronged attack on the vacuum-melted superalloys market (BW-Aug. 7 '54, p110). It opened a 125-ton-per-month consumable electrode melt shop at Watervliet, N. Y. Under construction there now is the second prong—an induction vacuum melt shop.

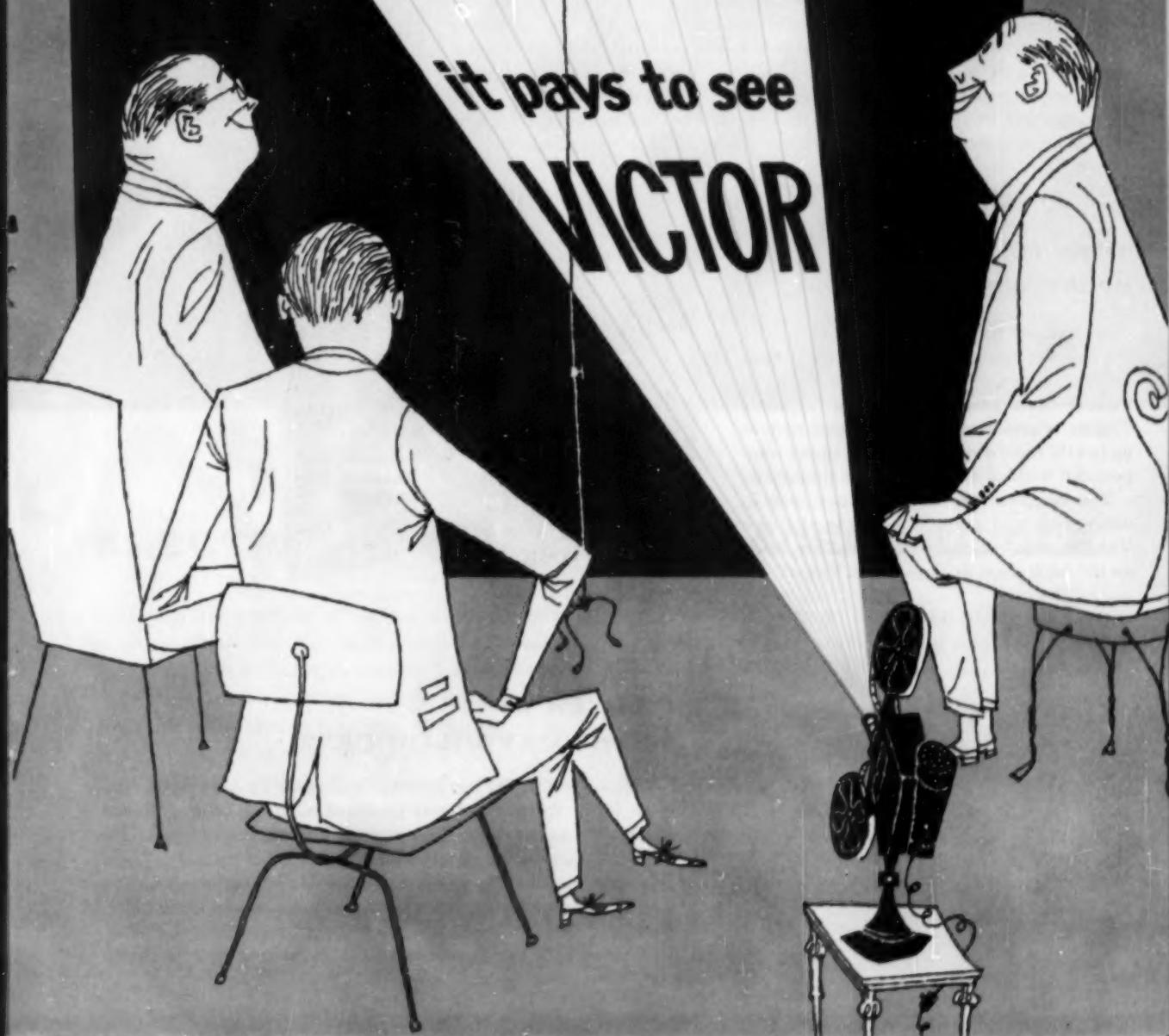
With the first prong—the consumable electrode melt shop—AL says that it will be able to produce large ingots of high-purity alloys at lower costs than had been possible before.

The new process yields cleaner steels, because the metal is melted in a water-cooled copper crucible. Thus, it has no chance to pick up impurities from the refractory bricks that line conventional crucible walls.

Prospects for the future are that AL will use its second shop, the induction vacuum melt shop, as a feeder for the consumable electrode shop. On the very highest-grade alloys, this would yield the ultimate in large, gas-free ingots.



it pays to see
VICTOR





PATTY BAKES A CAKE

Now-a-days, little girls of eight or so bake cakes that rival mother's when they use today's wonderful cake mixes. Just add liquid, stir, and into the oven it goes. Victor's complete line of controlled reaction phosphates and technical service helped to make many of these new mixes possible. Producers of cake mixes, self-rising flour, self-rising corn meal, and pancake flour, all have benefited from Victor's 57 years of specialization in the field of phosphates.

For information about phosphates that are used by leading mix makers and the milling industry, send for the Victafile listed on the back page.

TIME TO RELAX... EVERY WASHDAY

Washdays are no longer work . . . thanks to the new detergents that contain soil-chasing sodium tripolyphosphate. Today, many of these new detergents contain Victor "tripoly". Tripoly is preferred because it helps remove up to 41% more dirt than cleaning agents compounded without this remarkable phosphate.

The complete list of phosphates used in detergents and soaps is given in the new Victafile. Other industry Victafiles are listed on the back page. *It Pays to see Victor!*



LOUNGE BY HERMAN MILLER

FILL 'ER UP WITH "OXYCHLORIDE"?

Not quite. But if you buy gasoline containing an additive . . . it's quite likely the additive was produced with the help of Victor phosphorus oxychloride. "Oxychloride" is just one of a long list of intermediates that Victor offers the petroleum industry. These "chemical workmen" are used in many other industries, such as in drug synthesis, chemical manufacturing, plastics, and insecticides.

For additional information about Victor intermediates, and other Victor chemicals used in your industry, use the coupon on the back.





ELECTROLYTIC BATH REPLACES MUSCLE

Labor for the mechanical buffing of metal parts is costly, slow, and the results lack uniformity. Victor phosphoric acid, in a special bath, does a better job with less labor, and in a fraction of the time. Flat sheets of metal or pieces of intricate design come out of the bath with a brilliantly bright finish. The process works on

stainless steel, copper, brass, and other metals. Bright dipping of aluminum is another short cut to better finishes. This process requires no electric current.

See the back page for the complete list of the new Victafiles available. There's one for your industry. *It Pays to see Victor!*

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Here's a brand-new concept in chemical literature that's tailor-made for *your* industry. Each Victafile contains complete data on Victor phosphates, formates, and oxalates used in *your* industry. In simple, concise form, each Victafile provides important technical information on the Victor chemicals you can use to cut costs, increase production, or add sales appeal.

Send for your copy of the Victafile edited especially for *your* industry. Just circle the number of the Victafile you want, clip the coupon to your letterhead and mail it today.

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BCEP

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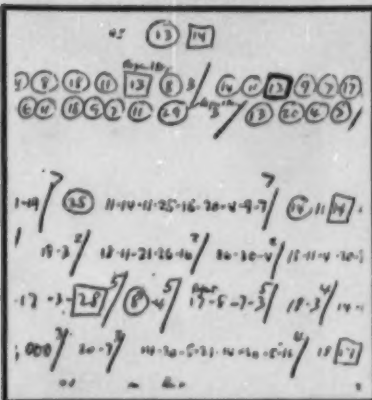
☐ We have a particular problem; if there's no obligation, please have technical service representative call.



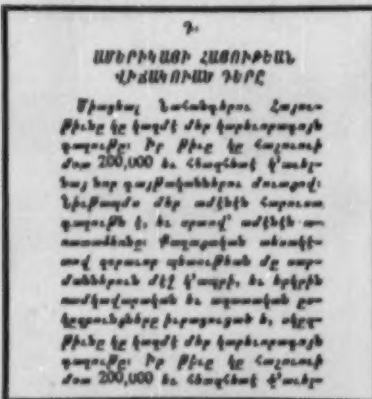
NEW PRODUCTS



Man at Machine . . .




. . . Copies This . . .



. . . And Gets This

The soldier in the picture can write in any one of 50 languages with the typewriter-like device shown in the top picture, as the Army demonstrated last week. He does not need to know the language he is typing, because he works from the page of symbols that is shown in the second picture. The result is shown in the bottom picture. This particular message happens to be Armenian.

• The Steps—A linguist first translates

Says  Phoebe Snow, and you'll agree—
“There’s nothing quite like...”



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Lackawanna Follow Through is a tradition on the Route of Phoebe Snow. It safeguards and speeds your shipments via Lackawanna. It provides every facility for any rail transportation problem, such as:

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- It is a nationwide transportation system through its connection with other major railroads at 36 strategic interchange points.
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to provide shippers with immediate information concerning the location of their cars in transit.

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Lackawanna Railroad

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in office planning*



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33" wall cabinet

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60" wall desk unit

the message from English into the language that's wanted. Then he substitutes numbers for the characters in the translation, with diagonals, circles, and squares to indicate punctuation.

The coded message then goes to a Vari-Type operator who picks the proper type font from the 50 that are available—Armenian font for typing in Armenian, for example. He inserts that font into the machine and strikes the keys according to the numerical sequence of the message. When completed, the typing resembles commercial printing. This is photographed, an offset plate is made, and printing begins in the specified language.

The Army Quartermaster Corps and the Office of the Chief of Psychological Warfare adapted a standard Vari-Typer to do this job. The basic machine, manufactured by the Ralph C. Coxhead Corp. of Newark, N. J., is the same as those used in offices to make up forms, booklets, and reports.



Troublefree Tubeless

Seiberling Rubber Co. said last week that its newest tubeless tire (picture) seals punctures, yet stays permanently in balance. Says J. B. Seiberling, company president, "This overcomes shortcomings of present tubeless tires."

All sealant-type tubeless tires have a layer of soft sealing gum that clings to nails and other puncturing objects. The new tire adds another element: a series of rubber cells beneath the tread that hold the gum in place.

Seiberling says these cells prevent the gum from being thrown to the center of the tread when the tire rolls at high speed, and from flowing to the bottom of the tire when it stops. Thus, the new tire stays in balance.

Says Seiberling: "These were two big problems with sealant-type tires. The gum would bunch up in a narrow strip, or lump up and throw the wheel out of balance."

Seiberling developed the rubber cell principle during World War II. It was used then in a bullet-sealing tube for military vehicles.

• Source: Seiberling Rubber Co., Akron 9, Ohio.

ANOTHER REASON WHY TRUCKERS LIKE COATED NYLON TARPS



EASE OF REPAIR...

**coated tarpaulins of Du Pont nylon can be repaired
in a matter of minutes**

In your shop, on a truck or even on the road, coated tarps of Du Pont nylon can be repaired easily in a matter of minutes! No need to send them away for costly stitched-patch repairs. A cemented patch like that shown here can be applied in about half an hour.

Ease of repair is just one of many time- and money-saving advantages you can expect with coated nylon on the job. They are lighter—one-

third to one-half the weight of regular tarps—and more flexible. This means quicker, more efficient handling. Coated nylon is *waterproof*, not just water-repellent. And coated nylon resists rot and mildew . . . an important reason why it lasts two to three times as long.

See how coated nylon tarps can save you time and money. Ask your supplier for complete information or write: Du Pont Company, Dept. B-10, 2494 Nemours Building, Wilmington 98, Del.



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... THROUGH CHEMISTRY

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Cold Heading Jobs

When you have "tough-to-make" cold heading jobs on your production schedule, it will pay you to consider the outstanding advantages offered by Keystone "Special Processed" Wire.

The superior grain flow characteristics of this wire provides the necessary upsetting and die forming qualities to withstand the terrific displacement of metal during the most difficult cold heading process. The structural soundness and uniformity of "Special Processed" Wire further proves itself through trouble-free machine operation, longer die life, and finished products of the highest quality.

If you have a special wire problem . . . large or small . . . let us help you solve it. Contact your Keystone representative or write.

Keystone Steel & Wire Company
Peoria 7, Illinois
Industrial Wire Specialists



Self-Stopping Duplicator

This is the first offset duplicating machine designed specifically for office use. Ditto, Inc., the manufacturer, says it's also the first to operate automatically.

Once the machine is loaded, an operator sets a regulator for the number of copies needed, then pushes a button. The machine turns itself on, paper rises into feeding position, ink and moisture begin to flow, and finished copies roll out at the rate of 8,000 per hour.

The offset paper is prepared in a standard typewriter, or with lithograph pencil or pen. When the finished mat is snapped into the machine, it is ready to go. Price: \$1,985.

• Source: Ditto, Inc., 2443 W. Harrison St., Chicago 12, Ill.

NEW PRODUCTS BRIEFS

A heat insulation product that withstands temperatures of 1,800F has been announced by Owens-Illinois Glass Co. It will be used as a covering for pipes and vessels, mainly in the chemical, power, and petroleum industries.

A new grade of stainless steel, containing little or no nickel, was announced last week by U.S. Steel Corp. The company says, "This opens the door to an entirely unexplored area for a reduction in the use of nickel." Several rolling and finishing problems must still be solved, but the company says these should be resolved in the near future.

Approaching absolute zero: Arthur D. Little, Inc., has a new refrigeration apparatus that is said to be capable of producing and maintaining temperatures within a fraction of a degree of absolute zero. The apparatus has no moving parts or fluids.

Marvibond

...the unique process
that combines the strength of metal
with the wear-resistant beauty
of vinyl for...

ULTRALITE
SAMSONITE
Luggage*



Shwayder Brothers—the country's leading luggage manufacturers—used this idea in their Ultralite Samsonite luggage. The result...a fast-selling suitcase that combines beauty, strength, and wear...and is 25% lighter.

THE MARVIBOND† Process—developed and licensed by Naugatuck Chemical—bonds film or sheeting made from Marvinol® resins to flat sheets of magnesium, aluminum, steel and other metals. After laminating, the sheets can be formed, crimped, punched, drilled and sheared like ordinary metal. The scuff-resistant, easy-to-clean vinyl covering gives good corrosion and rust protection, eliminates painting, cuts down production costs and adds more "sell" to your product.

Typical uses for MARVIBONDED materials are wainscoting in hospitals, hotels, schools, offices, playrooms, bathrooms and kitchens; also for cabinets, shower stalls, shelving, office partitions, desk tops, machine housings, radio and television cabinets, house trailers and interiors for buses, automobiles, railroad coaches, airplanes and ships.

If you are engaged in any one of these business activities, why not investigate the many advantages of the MARVIBOND Process? Call or write us for more information.

*Made by Shwayder Brothers Inc., Denver, Colorado

†Patent Pending



Naugatuck Chemical

Division of United States Rubber Company
Naugatuck, Connecticut



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PAGE

America's First Wire Fence • Since 1883



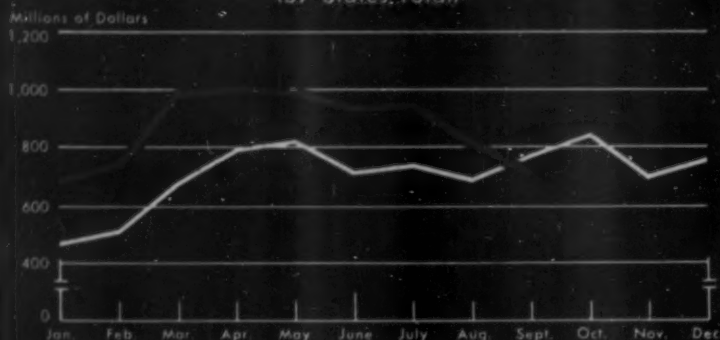
• You need a fence if your property lacks protection against common hazards. And you certainly want time-tested quality in the safeguard you provide. Whether you choose heavily galvanized Copper-Bearing Steel, corrosion-resisting Aluminum, or long-lasting Stainless Steel, PAGE Fence is quality controlled from raw metal to rugged fence erected on metal posts deep-set in concrete. Available are 8 basic styles, varied by heights, types of gates, top rails, and barbed wire strands for added security. Finally, your PAGE Fence will be expertly erected by a reliable, technically trained firm. For important fence data and name of nearest PAGE firm, write PAGE FENCE ASSOCIATION • Monaca, Pa.

FENCE

CHARTS OF THE WEEK

Residential Construction

(37 States, Total)



Data: F. W. Dodge Corporation

Dipping Below Year-Ago Levels

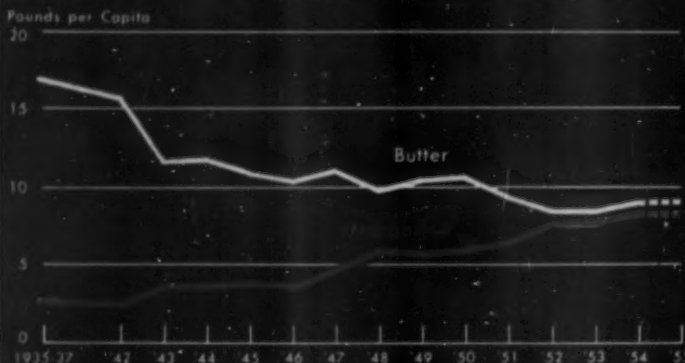
For the first time in 20 months, homebuilding contract awards in September dipped below year-ago figures in the 37 eastern states covered by F. W. Dodge Corp. reports. The construction news specialists recorded a total value of \$733,382,000 in residential contracts last month — down 5.7% from the previous September.

Homebuilding had been accelerating ever since December, 1953. The question now is whether or not the long

heralded decline in construction has begun. F. W. Dodge Corp. predicts that any moderate decline in housing starts should be offset by continued expansion in nonresidential building, at least for next year.

Businessmen indicate that they expect to continue spending for construction of new plants (BW-Sep. 17 '55, p28), and demand for schools and religious buildings is expected to remain high for a year or more.

Butter & Margarine Consumption

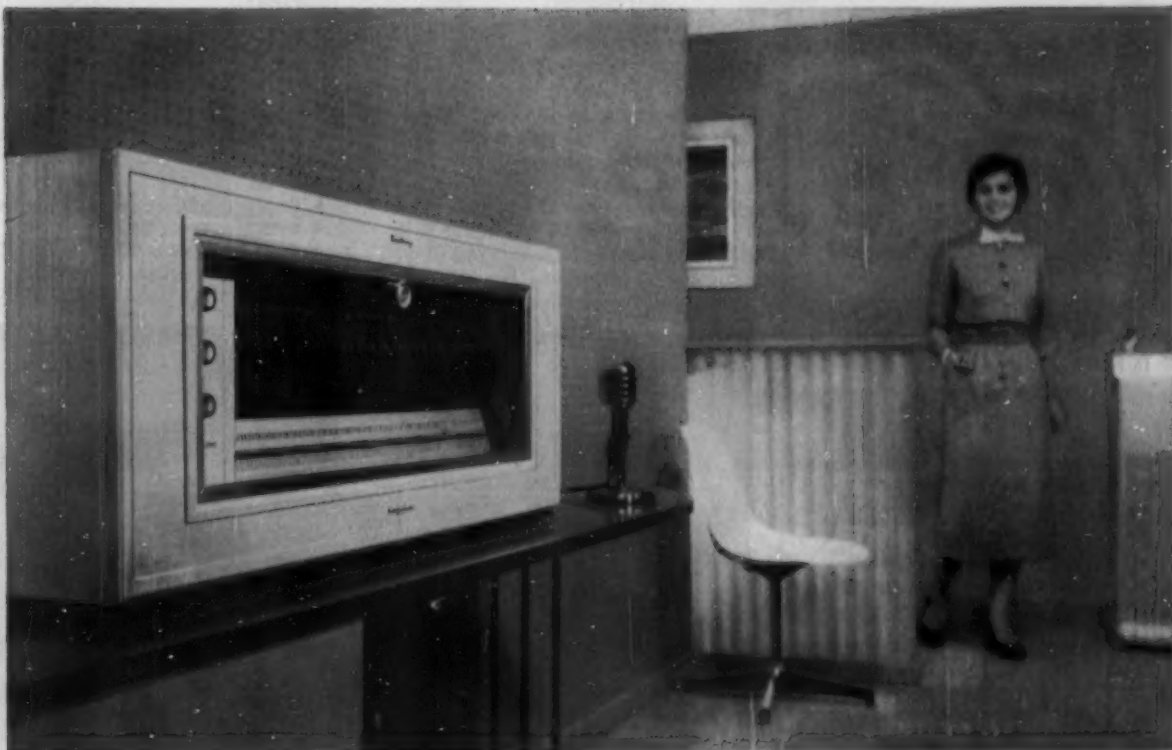


Data: U.S. Dept. of Agriculture

The First-Place Margin Narrows

A vivid picture of declining consumption of butter and rising use of margarine emerges from the chart. Per

capita butter consumption, which ran at 16.8 lb. per year in 1935-1939, had dropped last year to 9 lb. Over the same



Completely Automatic Operation—the Seeburg Library Unit in self-contained cabinet. Also available—the Seeburg Custom Unit for built-in installations.

If electricity is available to you so is Seeburg Music



The Seeburg Background Music Library. Monthly refresher service. Pressed for Seeburg by RCA Victor Custom Record Department.

That's because Seeburg music goes anywhere. Regardless of the size of your business or its location—in a large city, suburb or small town—you can have Seeburg Music . . . simply and economically.

The Seeburg Plan makes this versatile music system available to you on a lease-purchase agreement covering all the equipment. Nominal monthly payments apply toward ownership of the entire system.

The Seeburg Music has been scientifically developed for work and background music service to assure maximum benefits for your business.

The Seeburg System is built around the world-famous Seeburg Select-O-Matic mechanism that has a capacity of 400 selections of music. All components possess the finest high fidelity characteristics to provide the ultimate in work and background music reproduction.

The Microphone. The addition of a microphone for paging and public address greatly increases the value and utility of the system at no additional cost.

If You Have A Sound System, you'll be glad to learn how simple it is to add the benefits of Seeburg Music.



J. P. Seeburg Corporation, Chicago 22, Illinois

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decontamination

to **Zyglo**
inspection

More
Production Problems are
solved More Profitably with
**VAPOR BLAST
LIQUID HONING**

Check your own production process for operations in cleaning, descaling, plating — surface finishing of practically any type, either your parts or the tools that produce them. Chances are Vapor Blast Liquid Honing can show you surprising savings, faster production, better products on all those jobs large or small.

Costs you nothing to prove the benefits of VB Liquid Honing — the original Wet Blast process. Just brief us on your operation — or send samples for free laboratory processing. We'll provide all the facts without obligation. There's a VB representative nearby to help you.

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**VAPOR BLAST
MFG. CO.**
2043 W. ATKINSON AVE.
MILWAUKEE 16, WIS.

course, margarine climbed from 2.8 lb. in 1935-1939 to 8.4 lb. in 1954.

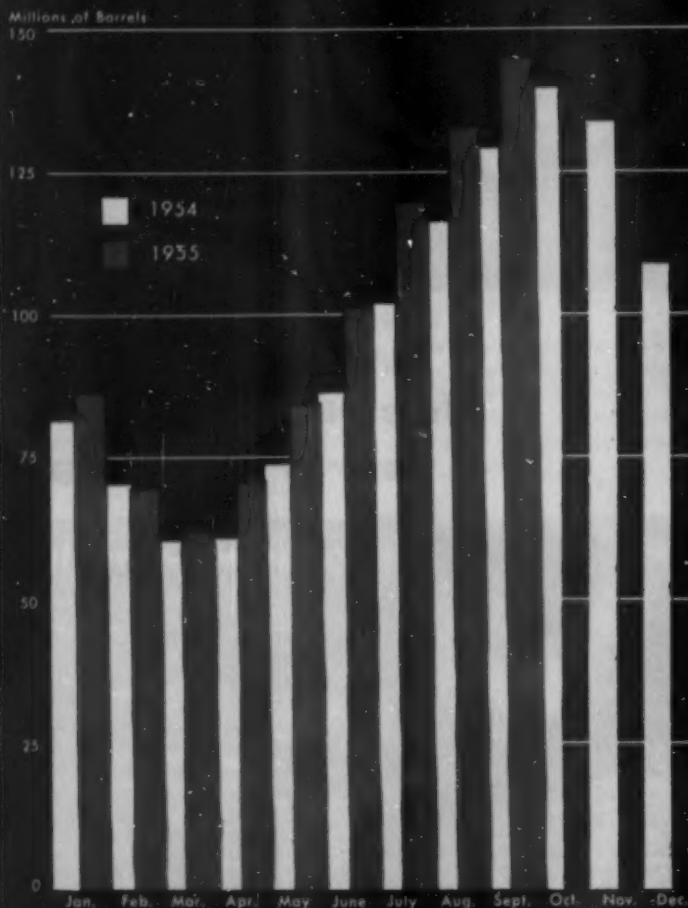
Today butter seems to have passed its low point and started to edge back up, while margarine is leveling off at its own peak. Federal gifts of butter to programs such as school lunches have helped the recent upturn. Without such gifts, butter consumption in 1953 and 1954 ran around 8.2 lb. and 8.4 lb., roughly the same as margarine. If you lump the two spreads, consumption is

still below prewar levels, due to rising popularity of such competitors as cheese and mayonnaise.

Chief causes of the gains for margarine are:

- Removal of restrictions on the sale of the colored product except in Wisconsin and Minnesota.
- Improvement in the product itself.
- Intensive merchandising.
- Cost — butter costs about 2½ times as much as margarine.

Fuel Oil Stocks



Data: Bureau of Mines; Aug. & Sept. 1955 Estimated from A.P.I. Data.

Waiting for Cold Weather

Refiners' stocks of distillate fuel could be embarrassing if this winter turns out to be a warm one. At the end of September, inventories were about 12% above year-ago levels, with demand so far

only around 8% more than in the 1954 period.

Recent market reports indicate little activity in light oils, which points to a generally filled-up position.



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How to Keep New Ideas Coming

● You can show a brain a problem but you can't make it think—unless . . .

● You provide it with a receptive, non-repressive atmosphere, and . . .

● You give it the proper incentive—experts say money works best.

One night last week, Armstrong Cork Co. treated 106 men and a girl to a regal dinner at the Lancaster (Pa.) Country Club. The company shot the works on the menu—shrimp cocktail, oyster bisque, sirloin steak, appropriate wines, peach Melba—for this was a distinguished group of guests: Armstrong employees who had created ideas for new products, new processes.

These 107 employees account for 278 patents credited to the company since the war, with another 170 patents pending. Most of them are career researchers, but there was a liberal sprinkling, too, of patent-holders from sales, manufacturing, and executive branches. It proves you can dredge up ideas in all phases of the business if you encourage creativity as Armstrong has done.

• **Payoff**—Ostensibly the group was assembled to hear a three-man panel discuss the latest theories and techniques of stimulating ideas. The panel was headed by Willard A. Pleuthner, chief of the "brainstorming" program at the advertising agency of Batten, Barton, Durstine & Osborn, a pioneer in work on group creative thinking.

Other panelists were John E. Arnold, Massachusetts Institute of Technology professor who teaches the country's best-known course in creative engineering, and C. F. Hix, Jr., supervisor of creative engineering courses at General Electric Co.

Interesting though the discussion was, the real reason for the get-together was to put inventors on the back, and encourage them to produce more and bigger ideas.

I. Putting Heads Together

Like Armstrong, forward-looking companies all across the country are realizing that sustained, dynamic growth—in fact, the nation's economic well-being—depends on a steady flow of new ideas and that something must be done to keep those ideas perking.

As Clifford J. Backstrand, Armstrong president, told the Lancaster group,

"There must be an incentive to invent as well as the freedom to do so."

• **Solo Ideas**—Some inventors will invent without any incentive but their own passion for inventing. For such people, exploring the unknown is a labor of love; they'll research their hearts out, regardless of what environment is provided for them.

Armstrong Cork has one research staffer who had to be cut off the payroll at the ebb of the Great Depression. He ignored his pink slip. Every day he showed up at the lab as usual, to work on a project that everyone else had long since written off as hopeless. "Got so embarrassing," says an executive, "that we finally had to hire him back." And eventually the lone wolf came up with a technique for producing a special type of floor covering that still has the competitors guessing.

• **Smoking Out Talent**—Most people with latent creative talent aren't as dedicated as this man. They need incentives, a stimulating environment, and it often takes great care not to snuff out the creative spark.

With increasing emphasis on technological progress, management can't afford to let this field lie fallow. That's why a dozen or so well-known companies have adopted creativity promotion techniques in the past year. They at least want to try the theory that ideas can be generated deliberately.

• **Applied Imagination**—For 20 years, Alex Osborn, the man on the far right in the BBD&O agency name, has preached the practical uses of idea stimulation. His book, *Applied Imagination* (Scribner, 1953), is used as a text in colleges, industry, and the armed forces.

With Osborn, the technique of stimulating ideas is no mere theory. He simply reports and interrelates the gimmicks and situations that worked for him in his advertising days. In the words of an enthusiastic disciple, "Alex has Dale Carnegie-ized creativity."

In recent years, Osborn has crusaded to get more courses on creative think-

ing into colleges. He has set up the Creative Education Foundation, which serves as a clearinghouse for programs on practical creativity. And he has thousands of converts.

He builds his "uninhibited thinking" stimulus around the brainstorming technique. This is an intellectual free-for-all aimed at throwing off the shackles of preconceptions, office politicking, conformity, and logic.

• **GE Plan**—About the time Osborn began preaching his ideas in the mid-1930s, General Electric Co. started a program to make its engineers more creative. GE was concerned about the scarcity of inventors among young people, just as companies are concerned today about the scarcity of engineers. It set up a two-year course to teach its most promising new employees to think inventively.

Since 1937, about 375 engineers have taken this course, and GE reports that 75% of them now occupy management positions or advanced places in their technical fields. They average nearly three times as many patents as other workers with the same educational background but without the special training.

Among other companies with creativity programs in the last year or so are B. F. Goodrich, Monsanto, Texas Co., Bell Labs, RCA, du Pont, International Business Machines, Union Carbide, U. S. Rubber, Dow Chemical, Ethyl Corp., and AC Sparkplug Div. of General Motors. Last week, Standard Oil Co. (Indiana) opened a course for all of the 130 technical supervisors in its research department. The subject: brainstorming technique.

• **In Halls of Ivy**—Colleges are expanding their coverage of the subject. Thanks to a Life magazine story about Prof. Arnold, MIT's course is probably best-known, but other pioneers in the field are New York University, University of Buffalo, and University of Nebraska. Others with courses in operation for some time include Rutgers and Boston University.

On the theoretical level, one acknowledged leader is Dr. J. Paul Guilford of the University of Southern California. Under a grant from the Office of Naval Research, he and colleagues have been working for years on the detection and measurement of "thinking abilities." His oft-quoted definition of creativity is hard to argue with: "Creativity is a pattern of abilities that enables a person to produce ideas that are rather original."

Other academicians are also work-



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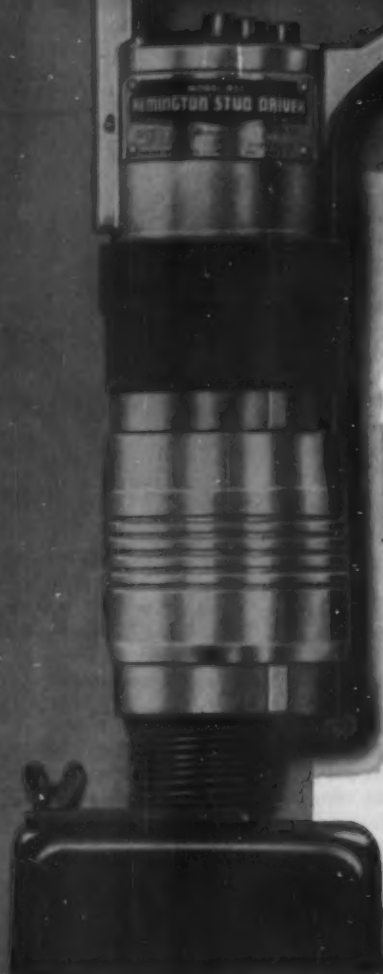
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ing on phases of the problem of evoking original ideas. Dr. Morris Stein of the University of Chicago is concentrating on the personality factors that are most directly involved in research creativity. Dr. Donald Pelz of the University of Michigan has been developing ways to measure scientific accomplishment.

II. Nurturing Ideas

The theorists of the Guilford-Stein-Pelz stamp are driving at the same point as the empiricists such as Osborn and William J. Gordon of Arthur D. Little, Inc., chief rulemakers for brainstorming. The idea is to increase the probability of stirring up original thoughts.

In this, the practical school knows what has been accomplished, how to formalize the process of creativity to some degree, and the students of theory hope to discover why these methods work, how to carry them further.

• **Nonconformists**—We know from history that the great creators—painters, composers, scientists—frequently were odd balls who would have had difficulty holding a job under conventional business conditions. They were often in conflict with established authority; they refused to be guided by precedent or by public opinion.

A lot of what the creativity researchers are teaching comes under the heading of "things not to do." Guilford talks about a "permissive" atmosphere. If we want creators, we shouldn't make a fetish of orthodoxy. The highly bureaucratic, seniority-conscious, rank-pulling organization is not a likely place for creativity to flourish, the experts say.

• **The Squelch**—Those who have studied creativity regard the average executive as, often unwittingly, an enemy of new ideas. His split-second decisions off the top of the head may squelch an offbeat thought. Instead of knocking down unconventional ideas, the executive should be trying to build them up. That's not easy, says Guilford, for "too many bosses are sensitive about their own ability to produce, hence fearful of their subordinates' ideas."

The error, they add, is not restricted to business executives. It is ingrained in parents, too. The average parent squelches original thought when he continually points out to a child the "right way" to do something or the "obvious answer."

New ideas generally come, the creativity people say, from people who don't realize, or haven't been told, that the obvious is obvious.

• **Lure of Money**—Not all of the creativity theses concerns things not to



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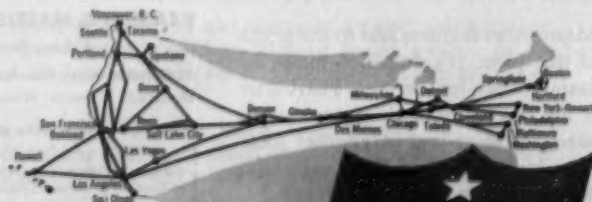
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With taxes on the rise in communities throughout the nation, the economy features of K&M "Century" Pipe offer a special appeal to responsible citizens. More and more cost-conscious officials and alert taxpayers recognize the savings it brings.

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do. Incentives must also be offered to bring the unorthodox idea out into the open. And the experts know of no more effective lure than money.

Promotions, titles, fancy accoutrements tend to repress rather than to stimulate (though extra days off, extra winter vacations, a moderate amount of convention-going are effective in relaxing the thinkers). Bestowing the paraphernalia of rank influences the creative man to try to please the giver of these honors rather than to think up something really new. He gets to fear jeopardizing his new comforts by "letting his boss down" with some crackpot idea.

Money, on the other hand, is the kind of prestige-maker that the most unconventional thinker can appreciate without feeling he has mortgaged his mind and soul.

● **Shower of Sparks**—Having established a receptive atmosphere for original thinking, company management must next start the ideas flowing. The recommended technique is brainstorming in its various forms.

Brainstorming is a sophisticated type of bull session in which the participants try to produce as many different ideas as possible in a given time. The wilder the idea, the better—it's always easier to chop a big idea down to size than to pump up a puny one.

Like all games, brainstorming has rules, largely written by Osborn and Gordon:

- There should be between 8 and 12 participants—no more, no less.

- Everyone should be approximately the same rank, so there's no kowtowing.

- No attempt to evaluate ideas is permitted during the session. A secretary jots down ideas, but no record is kept of who suggests what.

- If anyone throws cold water on an idea instead of trying to top it with a still more fanciful thought, the chairman rings a bell and the participant is dubbed one-third of a ghost. Three attempts at evaluation and he is excluded from further play.

- All participants receive equal credit for whatever constructive comes out of the session.

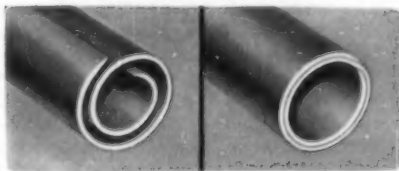
- Ideas are evaluated in a separate session, usually the next day.

- **Results Count**—Such sessions may seem the height of Madison Avenue frivolity to some practical businessmen, but they have produced astonishing results. The inventors' forum at Armstrong Cork was thought up this way. So was Campbell Soup's contest for naming Lassie's pups—which turned up 500,000 names, each accompanied by a wrapper. And another session produced 983 names for a new washing machine—the company concerned is still knee-deep in usable names. **END**

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Meat Packing—By using Cargotainers to handle meats at its modern plant in Baltimore, Md., Albert F. Goetze, Inc., has reduced handling costs by 90 per cent. By tiering them in storage, and collapsing those not in use, cold storage capacity has been doubled.



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More Industries Cargotainers

In the big trend toward automation throughout industry, problems of materials handling have loomed large and challenging.

Standard model steel wire mesh Cargotainers have gone a long way toward providing a cost-saving solution. Built for speedy bulk handling of materials with less labor, they also save storage space because they can be (1) tiered safely while fully loaded, and (2) collapsed into a compact bundle when not in use.

Sturdy construction gives them long service life. This element keeps their over-all cost, generally, well below that of containers they are replacing, such as: cardboard cartons, wooden boxes, burlap sacks, drums, metal tubs.

Equally important have been the savings in cost of container maintenance repair and replacement, less damage to parts during handling or shipment, greater safety to personnel. Visual inventory has simplified stocking and warehousing.

High strength-for-weight ratio makes Cargotainers easy to handle with common lift equipment ranging from the simplest lift jacks to hand pallet trucks, straddle trucks, platform trucks, fork trucks, cranes and conveyors. Often freight savings offer an added economy.

While standard Cargotainers have provided an answer to usual handling problems in many plants at a net savings frequently equal to more than their cost, special



by use of Cargotainers on Great Northern's Cascade Division. A set-out car has been eliminated. Mail is pre-sorted and handled more efficiently.



Utilities — Cargotainers have enabled Consumers Power Company, Detroit, Michigan, to centralize the servicing of 1,220,000 gas and electric meters at a single new General Meter Building. Speedier and more efficient service saves on inventory, operating and distribution costs.

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situations often require refinements in Cargotainer design.

To meet this need, materials handling engineers for the Pittsburgh Steel Products Company, who pioneered the Cargotainer, were quick to set up a research and development program.

Light duty Cargotainers vary in capacity from 200 to 500 pounds; medium duty from 1,000 to 2,000 pounds; and heavy duty from 3,000 to 6,000 pounds. Each of these patented models can be modified in an unlimited variety of ways.

Here are some of the refinements now in extensive usage: Ends and sides are designed in different styles to provide easy access to materials while the Cargotainers are tiered or feeding production lines. Some of these styles include the half-drop end, the lift-up end, the half-drop or partial-drop side.

Often materials within the Cargotainer can be divided or separated by means of transverse dividers, or horizontal separators. A one-piece or two-piece locking top converts the Cargotainer into a fully-contained wire mesh box. Legs fabricated from welded steel are built to withstand handling or shipping shock, can be varied in height to fit any lift equipment.

These are a few of the variations. There are many others. Nearly 80 per cent of the Cargotainers now in use throughout various industries have been "duty-designed" to meet specific handling requirements.

The "duty-design" of Cargotainers, then, offers a bonus savings over the use of standard models in many situations. Sometimes, this bonus alone is greater than the cost of the Cargotainers. It may bring net savings to as much as twice the amount of the initial investment.

Here are a few industries where Cargotainers are now being used in large volume: Auto makers, appliance manufacturing, food processing, meat packing, foundries, utilities, railroads,

machinery and equipment producers, textile manufacturing, tools and hardware, building products, farm implement producers, rubber.

If you have materials handling problems, why not call on the services of Pittsburgh Steel Products Company engineers to give you the benefit of their experience in designing a Cargotainer for your specific requirements. Write for descriptive literature, or call our closest district office today!

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Acid Drainage

Lab tests indicate cure for pyrite reaction in coal pits, leading to sulfuric acid pollution of nearby streams.

At the Federation of Sewage & Industrial Wastes meeting in Atlantic City last week, Walter A. Patrick, emeritus professor of chemistry at Johns Hopkins University, revealed what may be the key to the solution of one of the country's most serious pollution problems: mine acid drainage.

The problem is this. In a mine shaft, the weathering of a mineral known as pyrite, or fool's gold, unites it chemically with air and water to produce dilute sulfuric acid. Millions of tons of this stuff seep from the coal mines each year into rivers and streams. There it becomes economically impossible to neutralize the acid.

This polluted water can damage plants, boats, locks, bridges, water systems, and other equipment. It can also scare away manufacturers who are reluctant to locate factories on such streams because of the costly purification system they have to install before they can make use of the water.

- **Sealing**—Attempts to prevent the union of air, water, and pyrite by sealing off mine shafts or detouring water have not been notably successful.

Patrick and an assistant, Floyd W. McCollum, were doing some basic research on the acid-forming process sponsored by a grant from the Interstate Commission on the Potomac River Basin and the U.S. Public Health Service, when some other research he was doing on the corrosion of iron, suggested a new line of attack on the mine acid problem.

It was known that pyrite is a conductor of electricity. So Patrick raised two key questions: (1) Was the weathering of pyrite of a polar nature, that is, did the chemical change begin at two points as in corrosion of iron, and (2) did an undetected chemical, present in the mines and not in the lab, trigger the weathering?

- **The Culprit**—Experiments revealed that hydrogen sulfide was always present in coal mines, and triggered the action. This demonstrated to Patrick that the weathering of pyrite was of a polar nature.

The next step was to find a chemical that would stop the polar action. Tests showed that solutions of phosphate or of chromate sprayed on the pyrite would halt the formation of sulfuric acid.

Patrick's findings are based entirely on laboratory tests. The next step will be tests in the mines. **END**



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MARKETING

Seattle Department

Frederick & Nelson filled an armory with a wide variety of goods for its big home furnishing sale. And the customers poured in. They came by the family and went home with purchases and kids in tow (left).



SHOPPERS look over the merchandise in housewares aisle.



UMBRELLAS sold well at sale, held during rainy spell.

CUSTOMER selects foam rubber pillows from counter.



Store Packs an Armory

The downtown department store is sharpening its wits in the steadily sharpening battle for the consumer's money. It has good reason to do so. New competition from the suburbs and from the discount house—plus tougher competition from the department store and specialty store across the street—has made the battle an uphill one in recent years. The downtown store has had to find new ways to remind customers that it, too, is a good place to shop.

• "Sale of Sales"—One of the most spectacular such promotions occurred last week in Seattle. Frederick & Nelson, division of Marshall Field & Co., staged a gigantic "sale of sales." In some ways it resembled a similar venture by Carson Pirie Scott & Co. a year or so ago (BW—Feb. 27 '54, p. 53). But there was this difference: Carson opened its own warehouse to its customers. Frederick & Nelson took a leaf from the big home furnishings sales in such



YOUNG COUPLE examine rugs. Like many shoppers, they brought their youngsters along.

DEVELOPING YOUR EXECUTIVE SKILLS

JUST OUT! A new kind of book for executives making use of the idea of sharpening and improving your natural skills to give you an advantage in your own career. Each executive skill is discussed in detail, with practical chapters on being a good administrator, making decisions, planning, and communicating effectively. By Aaron Uris, Editor, Human Relations Division, Research Institute of America, 288 pp., \$1.50.

PROBLEMS OF THE INDEPENDENT BUSINESSMAN

JUST OUT! A casebook of small business operation and management, illustrating the factors that influence decisions in major policy problems. Cases are grouped according to business activity—retailing, wholesaling, service, manufacturing, etc. Each case brings out new aspects, new problems, and new principles of management. By Austin Grimshaw, Dean, Coll. of Bus. Adm., Univ. of Wash., 483 pp., \$6.50.

PROFIT MANAGEMENT AND CONTROL

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JUST OUT! A useful book for those in business who need a general background in the accounting that pertains to financial and management problems. The book shows how to use figures as a basis for decisions, and covers financial statement analysis, internal control, cost accounting, etc. By C. Aubrey Smith, Prof. of Acct., and Jim G. Ashburne, Asst. Prof. of Acct., Univ. of Texas, 480 pp., \$7.00.

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AS TIME GOES BY

Romantic Reflections

Increasing Rejections

The Stradivarius violin has long been a symbol of the finer things in life—enriched music, contentment and romance.

As time passes its value increases in terms of enhanced esteem.

But it doesn't pay to "fiddle" around with ancient machine tools.

The sour note of their increasing cost always shows up on the year-end balance sheet. Rejections mount and production slows down as the law of diminishing returns shaves your profits.

Lees-Bradner has declared war on old and worthless machine tools. With the newly designed, super efficient Lees-Bradner line of hobbing and threading machines you get production efficiency to meet today's, and tomorrow's, high-speed production needs.



Your Lees-Bradner representative can show you why these machines mean money in your pocket. Call him in or write direct to the company.

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the **LEES-BRADNER**
CLEVELAND 11, OHIO, U.S.A. *Company*



IF YOU THREAD OR HOB... GET A BETTER JOB WITH A LEES-BRADNER

arenas as New York's Madison Square Garden (BW—Sep.17'55,p30), and more especially from the smaller furniture stores in its own area. To put on its sale, it hired Seattle's so-called New Armory (to distinguish it from the older one). And it preserved many of its regular services: sales help, deliveries (at a price), charge accounts.

In the 60,000 sq. ft. of the Armory, Frederick & Nelson set up a complete line—roughly \$750,000 worth—of home furnishings: furniture, appliances, carpets, housewares, household linens, yard goods, even toys.

• **Creating Atmosphere**—To create a proper department store atmosphere, the store brought along some 200 personnel, executives, clerks, credit checkers; it installed about 30 telephones linking it with the downtown store to check charge account customers. An attractive snack bar took care of the inner man. And free buses from the downtown store carried customers straight to the sale site.

Prices were advertised as being usually at least 25% below regular prices for such goods. But because perhaps 85% of the merchandise was bought specially for the sale, at good prices from the manufacturer, bargains often ran much higher. Thus, broadloom remnants were priced 30% to 70% lower than they normally would be; cotton rugs, 40%; luggage, 30%; occasional chairs and sofas, 40%.

In most cases, the goods were on a par with the goods the downtown store carries. Familiar name brands—Drexel, Magnavox, Fieldcrest, Simmons, Skyway—showed up at the Armory just as they show at the store. A store of Frederick & Nelson's caliber can't afford to jeopardize its name by offering dogs.

• **The Purpose**—Store officials deny that this was an answer to the discounter, who isn't too strongly entrenched in Seattle, anyway. Neither will they grant that they are worried by competition from the Bon Marche, which calls itself the largest retail store west of Chicago, with its recent four-story addition. Frederick & Nelson's avowed purpose was to catch the many new homeowners in the area. Its primary concern, it reports, was to move a lot of goods at a profit. But it seems probable that it was anxious to impress its name on old and new customers.

In many ways, the Armory met the store's requirements ideally. Rental was not high; including trucking, lights, electricians, janitors, it ran some \$400 a day, the National Guard reports. Beyond that, the building's chief merit was that it provided an easy, inexpensive way to put on a big sale. For the sale, the store hauled 150 truckloads of goods to the spot; it cut costs way down by trucking them right to the

Who needs quiet more . . .
clerks or executives? — is
question to be considered
when determining . . .



Both general and executive offices at Trans World Airlines, New York, are quieted by ceilings of Armstrong Travertone®.

Which Office Areas Need Sound Conditioning?

Recognizing the value of quiet to comfortable, efficient working conditions, more and more businesses are including sound conditioning in their remodeling and building plans. Budget restrictions, however, sometimes limit acoustical treatment to areas where the need is the greatest.

In some companies these areas are the general offices, where large concentrations of personnel and business machines create loud and disturbing noise levels. Other firms, taking the stand that executives need to concentrate more intensely than the average employee, install acoustical ceilings in their private offices only.

Actually, noise can produce fatigue and tension in anyone, regardless of

position. And a secretary's error, caused by distracting noise levels, can be as harmful to a company as that of an executive. That's why most companies today provide acoustical treatment throughout their offices.

Quite often, a sound-conditioning job is done a little at a time over a period of years until the whole office area is treated. In fact, many Armstrong Acoustical Contractors report that these "repeat" customers are one of their biggest sources of business.

Armstrong Acoustical Contractors handle the full line of Armstrong sound-conditioning materials. These products offer a wide range of features, meeting any budget, building code, or appearance need. For full details and

a free job estimate, call your Armstrong Acoustical Contractor. And for the free new booklet, "Quiet at Work," write Armstrong Cork Company, 4210 Indian Road, Lancaster, Pennsylvania.

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SHOULD KNOW



In chess . . . or in shipping **THE RIGHT MOVE** **SOLVES THE PROBLEM**

White will checkmate in one simple move . . . and you can checkmate your shipping container problems with a move that's just as simple. Call on Fort Wayne for corrugated shipping containers designed and quality built specifically to overcome the hazards *your* product meets in transit. It costs you nothing to check . . . and it's your move.

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GENERAL OFFICES • FORT WAYNE 1, INDIANA

Corrugated Fibre Boxes • Corrugated Paper Products



"... the trade used the word
'fabulous' to measure the
results . . ."

STORY starts on p. 124

floor where the merchandise was sold, or to the warehouse space in the perimeter of the building, where it was stored. This meant tremendous savings in materials handling; some of the goods were left right in the shipping packages.

• **Cost-Cutting**—The store won't say what kind of profit it made, but hints that it came close to its usual markup. The manufacturers' special prices helped. And there were other ways of cutting costs. In departments such as housewares, clerks were supplemented by supermarket carts, and customers pretty much served themselves. Then, the store would deliver the heavier items, but it charged for the service—up to \$3 for the biggest merchandise. As a matter of fact, most people preferred to drive their own cars to the Armory and tote their purchases away themselves. The free bus service found it had little business.

During the first two days, the sale was open only to Frederick & Nelson's charge account customers. On Monday and Tuesday, the general public was invited. They came, whole families of them. One woman told a clerk, "You remember, you showed me a dining room suite Friday. I saw it Saturday. Now—on Monday—I have talked my husband into letting me buy it."

• **"Fabulous" Results**—The store won't cite sales results in figures. But officials were beaming with satisfaction, and the trade used the word "fabulous" to measure results. In fact, it went so well that officials elected to keep open for business for an additional day. By Tuesday afternoon there were so many holes in stocks of merchandise that Fredericks brought in other lines: women's coats, men's jackets, raincoats, and work clothes; boys' jackets.

The crowded floor, the many new charge accounts opened—the store won't say how many, but the credit clerks were busy—the influx of new homeowners, all indicated that the venture had achieved its goal. Indirectly, the sale's success might discourage new discounters who had ideas of opening up in the area.

• **Bonus**—Another unexpected bonus came to the main store. The special promotions advertising the Armory sale brought crowds of shoppers to the downtown store as well. Officials hardly dared believe it, but it looked as though much of the sale business was plus business. **END**

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INDUSTRIAL
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...OR SMALL
INDUSTRIAL
BUILDINGS



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- 3 "Stainless Steel Curtain Walls"—A 24-page progress report on methods. AIA File No. 15-H-1.

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tion; in reduced maintenance, easy cleaning and freedom from painting. And—compared to any other curtain wall facing material—stainless steel is the hardest, strongest and most resistant to smoke, fumes, weather, wear, etc. It is the one material that can best take a beating . . . that costs the least in the long run because it lasts the longest.

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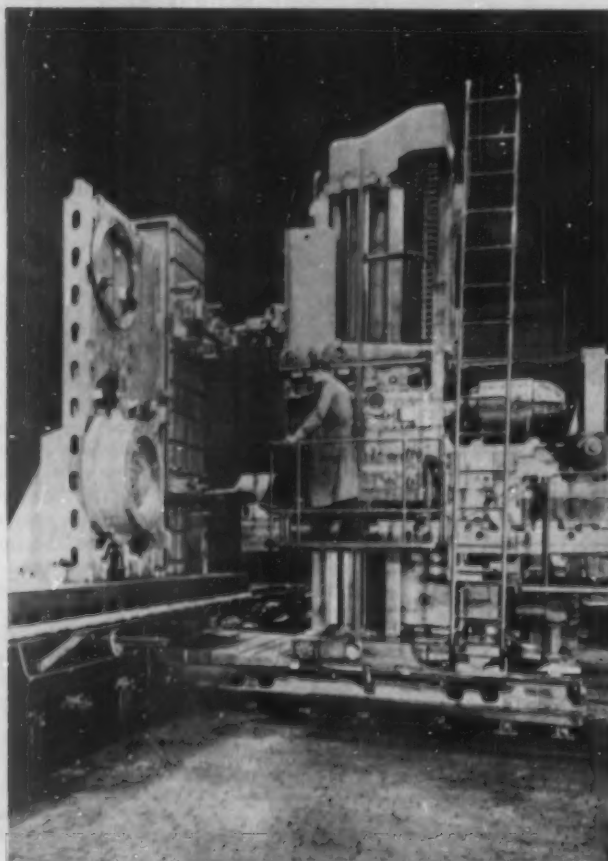


WAD 5504C Warehouse stocks carried by all Ryerson Steel plants



PROGRESS IN DIRECT CURRENT DRIVES

- U.S. industry is trending to automatic processes and machines...
- And statistics show a big upswing in d-c motor purchases.
- General Electric meets demand for high-output production equipment.



AUTOMATIC MACHINES like this boring mill use d-c drives for accurate speeds, faster output. Irregular, three dimensional shapes are machined automatically to close tolerances.

PERCENT

250

200

150

100

50

Since 1947:

1947 = BASE 100%

1948

250

200

150

100

50

D-c Motor

1947 = BASE 100%

1948

SOURCE: U.S. DEPT. OF COMMERCE,

D-c Drives:

U.S. industry is moving steadily toward mechanization, automatic machines and processes—to produce more and better goods. As a result, new and unique methods of mass production are constantly being developed.

Statistics show this trend to more automatic means of production is increasing the demand for direct-current drives (graphs).

● **Reasons**—Industry has a tough job ahead. If it is to meet an increased demand for goods and services of at least 40% by 1964, with a predicted increase of less than 13% in work force, further mechanization and more continuous processing is necessary. D-c equipment provides the versatility and sensitivity required to meet future high productivity levels.

● **Why D-c for Automatic Processing?**—Thousands of recent applications dramatically show why d-c drives are ideal for automatic and continuous processes. For instance, in manufacturing rubber-coated tire fabric, the process begins with a multitude of cord spools unwinding at high speeds. After racing through several

All Motor Purchases Up 20%

PERCENT INCREASE OR DECREASE ALL 1-200 HP MOTOR SALES—U.S.

1949

1950

1951

1952

1953

1954

Purchases Climb 85%

PERCENT INCREASE OR DECREASE ALL 1-200 HP DC MOTOR SALES—U.S.

1949

1950

1951

1952

1953

1954

SURVEY OF CURRENT BUSINESS

The Answer to Automatic Production

different processes, each requiring varying rates of speed, the completed product is wound up on another set of spools. The entire operation, driven by adjustable speed d-c equipment, is automatic—from start to finish.

• **Adjustable Speed**—The drive for this production line must do two things: 1. Adjust operating speeds at various stages of the process for proper cord tension. 2. Adjust speeds to accommodate a variety of cord sizes and types. The ability to meet these demands—fast and accurately—explains the trend to direct-current motors. There is no device yet discovered that is a better, more universal source of precisely controlled adjustable speed.

• **D-c Power Readily Available**—Although few utilities supply d-c power directly, the many advantages of d-c drives should not be ruled out when considering expansion or modernization. With packaged conversion equipment—rectifiers or motor-generator sets—d-c power supply is readily available. For instance, G-E Speed Variators convert incoming a-c

power to d-c in compact cabinets which install next to driven machinery or in any convenient load-center location.

• **Cost Factor**—Although the initial investment for this type of electrical equipment is usually higher than for constant-speed drives, the versatility of direct-current drives often increases machine output and quality of finished product to such an extent that over-all investment per unit of production goes down—not up.

• **Notable Examples**—D-c electronic printing-press drives add production flexibility to make practical speeds of up to 210,000 newspapers per hour. In the steel industry d-c driven cold-strip mills accelerate to full speed in 10 seconds and deliver steel strip at over 70 miles per hour. D-c log-carriage drives give the lumber industry high speed operation and fingertip control for increased board feet per hour pro-

duction. D-c adjustable-voltage shovel drives enable modern shovels to move up to 60 cubic yards per bite. In the paper industry d-c sectional paper machine drives provide operating flexibility needed for high-speed, uninterrupted production of quality paper.

• **New Developments**—G-E engineers are working constantly on the development of new d-c drives to meet demands of U.S. industry for faster, more automatic, more continuous production.

• **Industry-wide Applications**—D-c drives are boosting output in industries throughout the country. Companies desiring higher production can obtain equipment selection and application help from engineering specialists in 149 conveniently located G-E Apparatus Sales Offices. *Direct Current Motor and Generator Department, General Electric Company, Erie, Pennsylvania.*

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SALES OFFICES IN PRINCIPAL CITIES

THE MARKETING PATTERN

Shift in Purchasing Power

WHAT PATTERN will the distribution of income take in the next five years?

The changes in this pattern have been one of the most significant of all the changes in the postwar U.S. economy. The increasingly wider distribution of income has turned the country into a middle-income market, a development of enormous consequence for all business.

The change, as most people are aware, took place very rapidly. Only so recently as 1948, the distribution of disposable income in the U.S. looked something like this:



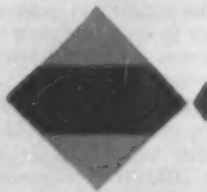
1948

58% of spending units had disposable income of \$3,000 or less

It could be described roughly as a pyramid, with its broad base still resting on the lower-income groups.

There were 29-million spending units in the country with less than \$3,000 annual disposable income. They comprised 58% of all spending units. The \$3,000-to-\$5,000 bracket contained about 30% of all units, about 15-million. Only about 4-million, or 8%, were in the \$5,000-to-\$7,500 class.

WITHIN FIVE years, the pattern had altered drastically, to this:



1953

52% had moved into the middle \$3,000 to \$7,500 bracket

You now had a diamond shape, with the broad band of consumers in what are roughly a middle-income category.

In 1953, the below-\$3,000 group

had shrunk to 22.5-million units, or 41% of the total. The \$3,000-to-\$5,000 band held 20-million, or 36%. And the \$5,000-to-\$7,500 band accounted for 8.8-million or 16%.

These computations do not, of course, take into account the differences in price and wage levels caused by inflation. Nevertheless, even allowing for them, it is apparent that the middle-income band has become the important factor in consumer purchasing power.

THE NEXT five years may produce further startling changes in the distribution of disposable income.

At least that is the view of Arno H. Johnson, vice-president and research director of J. Walter Thompson Co., the nation's largest advertising agency. At the Boston Conference on Distribution this week, Johnson presented the rosiest forecast yet for the five years coming up. What he foresaw is a pyramid again—but this time an inverted pyramid:



1960

Arno Johnson sees 69% in the \$3,000 to \$7,500 bracket

In 1960, said Johnson, the under-\$3,000 group will hold only 12-million units, or 20% of the total. The \$3,000-to-\$5,000 group will contain 25-million, or 42%. The \$5,000-to-\$7,500 band will have 16-million or 27%. And the very top of the heap—people with \$7,500 and over—will account for 11% of all the units as compared with 1953's 7%.

Johnson didn't necessarily say this is going to happen. What he did say was that this picture emerges if you explore the implications of the President's Economic Report to Congress early this year, with its goal of \$430-billion gross national product and a disposable income of \$320-billion in 1960.



FOUR KEY PARTS on this Hennessy automatic lubricator—the strainer, pump disks and gasket—are made of Du Pont “Zytel” nylon resin. (Parts molded by Hesco, Hagerstown, Maryland)

Parts made of **ZYTEL®**...

help solve “hot-box” problem

The elimination of the “hot-box” problem represents an important railroad advance—especially in freight handling. The full weight of a freight car rests on eight journals. Unless these are continually lubricated, friction develops and causes a “hot box” which can result in delays or possible derailment.

Where waste is used as a means of lubrication, the waste serves as a wicking, picking up oil from the bot-

tom of the journal box and transferring it to the journal by direct contact. The new Hennessy automatic lubricator employs the motion of the car to continually pump oil onto the journal.

Four key parts in this new lubricator are fashioned from “Zytel” nylon resin. Chosen for its exceptional durability, Du Pont “Zytel” resists abrasion and severe impact... won’t warp from oil or deform from heat up to 250°F. Resilient “Zytel” won’t rust or corrode.

In addition to its durability, “Zytel” offers remarkable production economy. Parts of “Zytel” can be mass-produced at a low unit cost, often replacing a complex assembly of conventional materials. “Zytel” usually requires no further finishing after fabrication. For information that can help you improve design, performance and economy with “Zytel” or the other members of the Du Pont family of engineering materials, clip and mail this coupon.

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Dizzy Dean pitches fast talk from the press box

Baseball's Ol' Diz used to bewilder the batters with his famous fast ball. Today he broadcasts major league games on his "TV Game of the Week" with same colorful energy that made him an all-time baseball great. In offices, however, fast talk combined with clattering typewriters and jangling telephones adds up to noise that can reduce office efficiency.

Acoustimetal ceilings whisk noise out of busy offices, making them efficient, enjoyable places to work. Fireproof perforated metal panels, backed with incombustible pads, are easily wiped clean with a damp cloth. And you can repaint Acoustimetal ceilings...sound absorption isn't affected. Each unit is easily removed for quick access to utilities. Whether you're building or remodeling, include Gold Bond Acoustimetal in your plans.



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You'll find his name in the Yellow Pages of your phone book under "Acoustical Contractors." For free magazine, **THE DECIBEL**, giving you actual acoustical case histories, write Dept. BW-105,

NATIONAL GYPSUM COMPANY
BUFFALO 2, N. Y.

Get sound comfort with

Gold Bond
ACOUSTICAL PRODUCTS

"Agribusiness"

It's a new word, and its inventor says the concept behind it could chart a way to handle farm problems.

A new word—one that's likely to haunt businessmen as election year approaches and the politics of agriculture get an ever-increasing airing—was born this week at the Boston Conference on Distribution.

The word: "Agribusiness."

The man who coined it: John H. Davis, former assistant Agriculture Secy. and president of the Commodity Credit Corp., now director of Harvard Business School's newly created program in agriculture and business.

The meaning: Well, let Davis explain it. "In brief," he says, "agribusiness refers to the sum total of all operations involved in the production and distribution of food and fiber."

The significance: Again, hear Davis. "The agribusiness concept," he says, "can be used as a starting point in the attack on the problem of farm surpluses and dipping farm incomes."

Davis was one of 29 speakers on the program of the annual Boston event, which this year was devoted to the topic of "Distribution in an Expanding Economy." The two-day meeting drew about 700 people. Only about 150 conferees failed to arrive because of the floods around southern New England.

• **Experts' Ideas**—Included on the program were J. Frederick Dewhurst, executive director of the Twentieth Century Fund, who spoke on productivity and consumption trends (page 200); Arno H. Johnson, vice-president of J. Walter Thompson Co., who looked ahead over the next five years at consumer markets (page 132); and Victor Gruen, architect and shopping center designer, who traced the relationship between the growth of suburban retail centers and plans for the revival of downtown areas (page 64).

But to Davis goes the award for coining a word that is bound to complicate the layman's life, no matter how much aid it might be for economists.

• **Definition**—He invented "agribusiness" to describe the place of the farm problem in the context of the whole U.S. economy. This is his full definition of the word:

"Agribusiness means the sum of all farming operations, plus the manufacture and distribution of all farm production supplies provided by business, plus the total of all operations connected with the handling, storage, processing, and distribution of farm commodities."

Davis says his reason for coining the

Another reason why Hammermill Bond prints better, types better, looks better



People come from all over to see what makes Hammermill Bond even cleaner than before

THE PEOPLE in this picture happen to be Hammermill experts, studying something brand new in papermaking. But they might well be some of the paper experts that have been coming from all over the country and even from abroad to see this revolutionary Hammermill invention.

This invention took Hammermill four years to develop and half a million dollars to install. It has just one job—to make Hammermill Bond even cleaner than it was before.

The pulp Hammermill Bond is made from gets six separate washings and three different stages of bleaching. That's why in the past you've found so few specks to mar Hammermill Bond's brilliant blue-whiteness.

But now, Hammermill's new invention gives the pulp a final cleaning of a different kind. The pulp is whirled under pressure through the cone-shaped pipes shown above at the left. The dirt particles, being heavier, are flung to the outside and carried away, so they can never get into the paper. The clean fibers rise to the top, and are piped immediately to the papermaking machine.

That's why the Hammermill Bond you buy today is even cleaner than before. It's an example of the technological advances that each year bring paper experts from all over the world to see Hammermill papers made—an example of how no expense is spared to make your Hammermill Bond, (1) *print* better—(2) *type* better—

(3) *look* better. Printers everywhere use Hammermill papers. Many display this shield. Hammermill Paper Company, Erie, Pa.



—yet **HAMMERMILL BOND** costs no more

—and actually less than many other watermarked papers



take
a
**SECOND
LOOK**

AT YOUR RECORD KEEPING

... and the second look will give you a shock (if you are using conventional filing equipment for large-volume records)! The second look will unmask unorganized and purposeless activity when it comes to keeping records ... records on credit, equipment, sales, service, cost, cross-index, etc.

Now ... look at the operating advantages offered by motorized Diebold Super Elevator Files. With these files, you can "marshal" records for orderly productive work. Operators can remain seated. Records are brought to them instantly at the touch of a button.

Diebold Elevator Files save up to 50% in time and space costs for their users ... savings that show initial investment write-offs in 5 to 18 months! For example ... \$14,000.00 annual savings write-off initial investment in 17 weeks! Take that second look ... today ... and call your local Diebold representative or mail this coupon.

... and you'll see how to save money with
**DIEBOLD MOTORIZED
SUPER ELEVATOR
FILES**



Compare your
operations
with actual
Elevator File
performance
studies.



Diebold®
INCORPORATED

926 Mulberry Rd., S. E. • Canton 2, Ohio

DI-180-A-ED

Diebold, Incorporated
926 Mulberry Rd., S. E.
Canton 2, Ohio

Please show us how Super Elevator Files can save us
time and money for _____ records.

Firm _____

Individual _____ Title _____

Street _____

City _____ Zone _____ State _____

word is that in any attempt to solve the problem of dropping farm income, you must take into account business as well as agriculture.

• **Founded on Figures**—Just 30 years ago, Davis points out, agriculture produced 75% to 80% of its production supplies and bought only the remaining 20% to 25% from business. But today, he says, the farmer buys from business about half of his production supplies: machinery, tractors, fuel, seed, fertilizer. These purchases now run at a rate of about \$15-billion a year.

But this figure, says Davis, represents only a small part of the farmer's impact on the economy. "Farmers combine these purchase supplies with items from the farm, such as land, management, and labor to produce food and fiber. This food and fiber they sell to business for an aggregate sum of about \$30-billion. Business, in turn, assembles, stores, processes, and packages these commodities and distributes the end products derived from them to the consumer for an aggregate bill of about \$90-billion."

Figuring things this way Davis arrives at his estimate that the agribusiness component of the total U. S. economy now accounts for no less than 40% of the total work force and about 40% of the gross national product.

• **Path to Solution?**—Davis believes that the agribusiness concept makes a fine new piece of equipment for tackling the farm problem, because it takes such a wide view of the farmer's effect on the economy.

He says, "We cannot expect to find answers to the farm problem by studying farm costs or so-called middlemen's margins as separate things."

• **Off the Farm**—Some of the other speakers at Boston led the conference away from the farm and into a brave new world.

Dr. W. R. G. Baker, vice-president and general manager of General Electric Co.'s Electronics Div., saw automation making its way into the home. He said, "I do not think it impractical to envision the day when it enters our households. Just as it programs machinery in a factory, electronics could be used to tie together radio-frequency cooking, electronic refrigerators, dishwashers, laundries, dust eliminators, entertainment appliances, and numerous other gadgets."

Dr. Baker took a look outside the house, too, and came up with this prediction: "It may be possible to drive into a gas station, have your tank filled automatically and have the cost billed to your electronic credit card by machine." And of one aspect of the future in the air, he says: "It is not outside the realm of possibility that we will have planes ground-controlled from takeoff to landing." **END**

IDEAS THAT SELL BY PACKAGE MACHINERY



DOUBLE DUTY

The idea is to expose spark plugs to people . . . but not to moisture. Package's answer: a pliofilm overwrap, designed to do double duty for Champion. It helps protect the product, and creates a smart showcase for each plug.

Perhaps you feel you should be getting a greater return on your packaging investment. Lower unit cost, faster output, product protection, new merchandising values—there are many ways the nearest Package representative can help. He offers you the broadest equipment line available . . . and knows how to apply it in solving both marketing and production problems.

PACKAGING IS PART OF YOUR PROFIT PICTURE

EAST LONGMEADOW, MASSACHUSETTS

NEW YORK • PHILADELPHIA • BOSTON • CLEVELAND • CHICAGO • MINNEAPOLIS • ATLANTA
DALLAS • DENVER • LOS ANGELES • SAN FRANCISCO • SEATTLE • TORONTO

PACKAGE
MACHINERY COMPANY

PROMOTION FOR HIM



TRAGEDY FOR HER...

A transfer to another city may mean a promotion for that key worker. But he won't be happy if his wife is upset over the change. Ease the pain of being uprooted. Use North American Van Lines to move their household goods safely, smoothly, on time.

Keep up Efficiency with "WIFE APPROVED" MOVES

Employees appreciate North American's skilled packing and dependable services. The transplanted man tackles his new duties with full efficiency—thanks to a "wife approved" North American move!

CALL YOUR NAVL AGENT for finest moving, packing, storage. Ask for sample of new brochure, "So You're Moving!", to be given all transferred personnel to boost morale, relieve family worry. Or write NORTH AMERICAN VAN LINES, Dept. BW105, Fort Wayne 1, Indiana.

Find This
NAVL Oval in
Yellow Pages
Under "Movers"



North American Van Lines, Inc., Offices: Ft. Wayne 1, Ind.
North American Van Lines, Canada Ltd., Toronto, Canada
Household Goods • Office Equipment • Exhibits
THE LEADER IN LONG-DISTANCE MOVING
More Agents in More Cities than Any Other Van Line

In Marketing

• • •

Armour All Churned Up as FTC Frowns on Cloverbloom Oleo Ads

A major policy test on what margarine advertising may say without violating a law designed to protect butter from "unfair competition" is shaping up between the Federal Trade Commission and Armour & Co.

Armour last week gave notice it may fight FTC charges that ads for its margarine, Cloverbloom "99," violate the 1950 Oleo-margarine Act. The act prohibits any suggestion in ad copy that oleo is a "dairy product." FTC charges that such statements as "churned a full hour" amount to a suggestion that Armour's Cloverbloom is a dairy product. The point, according to FTC, is that the law forbids oleo advertising that associates it with dairy terms (BW—Jun. 11 '55, p70).

Armour, in denying FTC's charges last week, says the consumer has "the right to know" how a product is actually made. The company claims it invented a process in 1950, which for the first time made it possible actually to "churn" margarine ingredients. Armour also claims that FTC has examined its advertising on three different occasions since 1950 without serious objection.

Armour, hinting at future court tests, also attacks the 1950 law as unconstitutional, arbitrary, and a violation of due process and free speech if it is applied to ban Cloverbloom advertising.

• • •

New GE Distribution Network Will Speed TV, Radio Replacements

To speed up delivery of replacement parts to radio and television transmitting stations, General Electric Co. is setting up a brand new distribution network. Up till now, these parts have been shipped direct from factory to the customer.

From the station's point of view, the big gain will be to cut down time. When a parts failure causes a station to go off the air, or to operate a reduced power, it can cost heavy money. GE hopes that, with suppliers closer at hand, the company, too, will benefit by getting a bigger slice of the replacement business. It figures that right now it is barely getting even 50% of replacement sales.

Eventually, the company's Electronic Div. will have a distributor for every one of its 15 product-service districts. The distributor and the sales office will work closely together. When GE gets a new customer, the distributor will get the word.

• • •

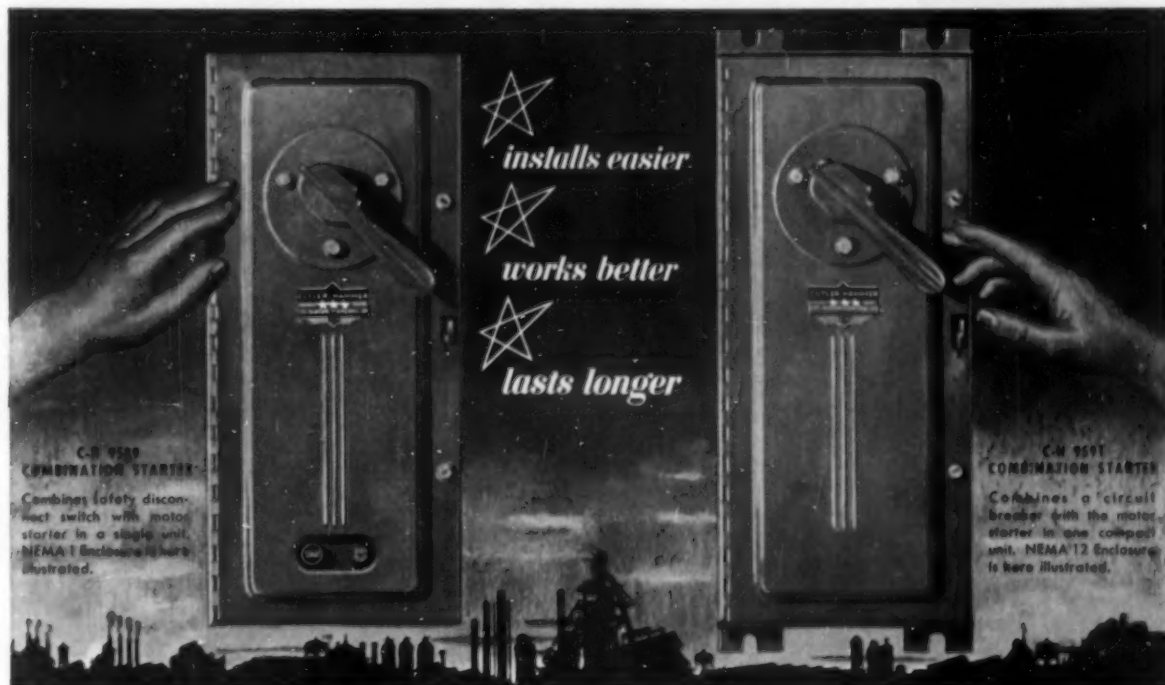
Brooks Bros. Profits Mirror Rise of the Ivy League Look

The Ivy League or Madison Ave. look in men's clothes is having a bigger heyday than ever, according to Brooks Bros., Inc., New York men's store whose name has become synonymous with this style.

Brooks' earnings, on a steady rise since 1946, jumped a startling 120% for the year ending last July 31, to \$797,683. Sales, also up

WHAT'S NEW IN MOTOR CONTROL? ★ ★ ★ GET IT FIRST IN CUTLER-HAMMER

New Cutler-Hammer Three-Star Combination Starters offer industry important new economies



C-H 9589 COMBINATION STARTER
Combines safety disconnect switch with motor starter in a single unit. NEMA 1 Enclosure is here illustrated.

installs easier
works better
lasts longer

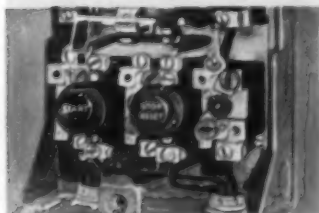
C-H 9591 COMBINATION STARTER
Combines a circuit breaker with the motor starter in one compact unit. NEMA 12 Enclosure is here illustrated.

Convenience and economy are basic advantages of combination starters. Users everywhere say the new Cutler-Hammer ★ ★ ★ Combination Starters bring these basic advantages to new high levels of importance. Contact life is so amazingly improved that maintenance care is *never* needed in all normal uses. Adjustable load sensing coils permit motors to work at top capacity without hazard to provide maximum production without needless work interruptions. And the widely praised Cutler-Hammer exclusive, full three-phase overload protection in standard combination starters, is optional at slight additional cost.

*The three silver stars
stand for three new standards*

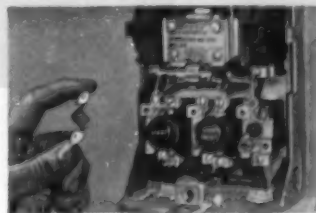


Compare the performance and economies of these remarkable new Cutler-Hammer Three-Star Combination Starters with any you have ever known. Cutler-Hammer Bulletin 9589 Combination Starters incorporate rugged disconnect switches of advanced design (fused or unfused). Cutler-Hammer Bulletin 9591 Combination Starters are equipped with circuit breakers. Your nearby Cutler-Hammer Authorized Distributor is stocked and ready to serve you. Order from him today.
CUTLER-HAMMER, Inc., 1275 St. Paul Avenue, Milwaukee 1, Wisconsin.



Full Three-Phase Protection

Only three overload relays can give complete three-phase protection to avoid motor burn-outs and their costly interruptions to production. And only Cutler-Hammer offers this complete three-phase protection in standard combination starters. You pay only for the third relay, nothing extra for special engineering or special enclosures.



Adjustable Load Sensing Coils

The accurate adjustment of overload protection permits motors to work harder without damage to motor windings. This is more important than ever with the newer type small frame motors. Adjustable load sensing coils in these new starters provide 3% loading accuracy instead of the 10% to 12% accuracy in competitive control.



Superlife Vertical Contacts

Experienced control users insist on dust-safe vertical contacts. And now the famous Cutler-Hammer vertical contacts have been doubly improved. First, their new lightweight design cuts bounce to reduce arcing. Second, any arcing that might occur is now pressure-quenched. Compare performance and see the difference.

modern design specifies stainless steel

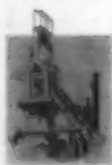


McLouth *STAINLESS* **Steel** **for the home**



The lady agrees with the architect that her modern, cheerful, Stainless Steel kitchen will be the most beautiful room in the new house. Stainless Steel is the bright, long lasting metal that will not tarnish, is easy to clean and a joy to live with.

For the product you make today and the product you plan for tomorrow specify McLouth high quality sheet and strip Stainless Steel.



McLOUTH STEEL CORPORATION
Detroit, Michigan

MANUFACTURERS OF STAINLESS AND CARBON STEELS

every year since 1946, were up over 13% to \$20.4-million.

Brooks Bros. was bought several years ago by the Julius Garfinckel & Co. department stores of Washington, D. C., at the same time De Pinna specialty shop chain was merged with Brooks. Since then Brooks has featured more aggressive merchandising, sales, and the like.

Brooks Pres. John C. Wood explains the profit boost in terms of stabilized general operating expenses. That means every additional sales dollar generates a higher profit. New combination synthetic-natural fiber suits have helped, he adds.

Wood thinks men are turning more and more to Brooks styles. "We haven't changed our pricing, quality or merchandising," Wood said, "and don't intend to." Brooks features its own labels, plus a few British brands, carries almost no women's wear.

• • •


Overseas Expansion Cause of Coke Shift

Stepped-up international expansion and a hard-sell approach are credited as the reasons behind Coca Cola Co.'s switch of advertising accounts from D'Arcy Advertising Co. to McCann-Erickson, Inc. last week.

McCann, which has handled Coke's South American advertising for 10 years, has moved to fourth place among New York agencies, behind J. Walter Thompson, Young & Rubicam, and Batten, Barton, Durstine & Osborn. Last year its total billings stood at \$133-million.

Coca Cola is close-mouthed on its ad budget, but the trade reports the figure at between \$9-\$15-million a year, and growing. Coca Cola, along with its competition, is putting on new drives for foreign markets, says McCann. It will be in a good position to integrate domestic and foreign ads because of its South American Coke experience.

D'Arcy has handled the domestic Coca Cola account for 49 years, starting when the ad budget was about \$100,000. The agency ranks 17th in billings with \$44.5-million, having moved up the list in recent years. It says while it regrets the Coca Cola loss new business will more than make up for it.

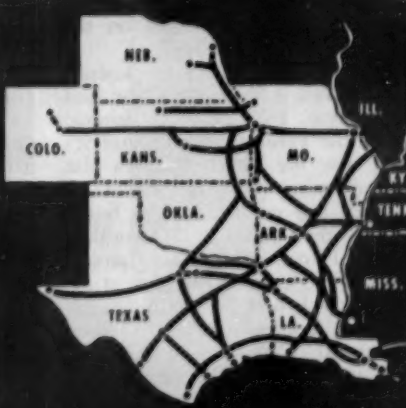



Bright idea!

... ship
and travel
West-Southwest
via

**MISSOURI
PACIFIC
LINES**

Route of the SAGLES

MODERN...PROGRESSIVE

MO-PAC

Old Peru Hand Looks Homeward



Robert P. Koenig, president of Cerro de Pasco Corp., looks to a future at once abroad, mining the Peruvian Andes, and in the U.S., in new investment opportunities. In Cerro's case, the expatriate company comes home.

Cerro's world is high and inhospitable, yet a great storehouse of minerals. Today, at Oroya (map), Cerro operates one of industry's most complex smelters (picture), and runs a highland empire of mines, concentrators, railroads, ranches, schools, and hospitals.

A MINING MAN, declares Robert P. Koenig (cover), must be ready to jump when he sees something good. Otherwise a business based on depleting assets will surely die. Until not long ago, Cerro de Pasco Corp. seemed content to await a natural death, and be interred in worked-out mines on the bleak Andean Sierra of Peru.

Not so now. Under Pres. Koenig, Cerro de Pasco is becoming a new kind of corporation. Its world is still mining, high on the Peruvian "Hill"; and it's finding new life there. But it's also putting down new roots in the U.S.

In Peru this month, work is beginning on the gigantic, \$210-million Southern Peru Copper Corp. project (BW-Jan.15'55, p130), the start of development of two of the world's largest copper ore bodies (totaling 1-billion tons and up). Cerro is a 16% partner in the venture. It is also newly interested in Peruvian explosives manufacture, a refractory business, a wire-drawing mill. Cerro is hunting oil on the eastern slope of the Andes. At its 24-mi. high operating headquarters at Oroya, Cerro is spending millions of dollars to increase its output of copper, lead, zinc, bismuth, other metals.

But Cerro's future may lie equally outside Peru—even in manufacturing on New York's suburban Long Island:

This week, Cerro is negotiating to buy, for \$20.25-million, Circle Wire & Cable Corp., Maspeth (Long Island) producer of copper wire, conduits, cables. Acquisition of Circle would be

the latest step in a program to diversify Cerro, already launched into U.S. oil production, and into a search for promising mining opportunities here, in Canada, and—according to Koenig—anywhere something turns up.

• **Out and Back**—Like Cerro, Robert Koenig cut his mining teeth in Peru. This weekend marks the 30th anniversary of the day when, as a young geologist, Koenig arrived on the Hill to work for Cerro. He stayed just 17 months. On his wall at Cerro's New York office hangs a separation notice, announcing to whom it might concern that Koenig was not reemployable by Cerro de Pasco.

Koenig came back to Peru and Cerro in 1950—as president. For five years he has been trying to put the company in shape for a long prosperous life.

• **Its Place**—There's a place for organizations like Cerro. Industrial progress demands vast new sources of raw materials (page 72). Nature, uncooperative, often locks its treasures in remote nooks and crannies of foreign lands. The companies that seek out and produce these essentials must work under difficult conditions, assume risks and responsibilities that few businesses run up against. Success at the game from mid-20th Century on will require new social, technological, financial, and diplomatic techniques.

Koenig would be the first to admit that Cerro has not been—and is not yet—the model of enlightened overseas operation. Yet few companies have



CERRO DE PASCO
14,200

GOYLLARISQUISGA



AMAZON FOREST

OROYA
12,200

MOROCOCHA
14,850

CASAPALCA

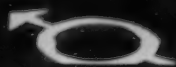
SAN CRISTOBAL

CHOSICA
2,800

LIMA

JATUNHUASI

Yauricocha



For Easiest, Most Economical Systematic RECORD STORAGE



Liberty BOXES

Keep expensive steel file space active by transferring inactive records to Liberty Storage Boxes. Liberty Boxes are best because—

- Highest quality materials throughout
- Systematic labeling makes locating any record easy
- Records are protected against dust and spilling
- 25 Standard Stock Sizes... special sizes made to order
- Patented Closure is easy-to-use, keeps records clean
- Take years and years of rough usage

Sold by all leading stationers
Send today for FREE Catalog picturing and describing economical record storage products for every business.


BANKERS BOX COMPANY
720 S. Dearborn Street • Chicago 5, Illinois

"CANADA TODAY"

Ask for
your copy of
the revised edition...

This 100-page, fact-packed, photo-filled businessman's guide to Canadian opportunity, has been prepared especially for you by Canada's First Bank. For your free copy, write any U. S. office or Head Office, Montreal.

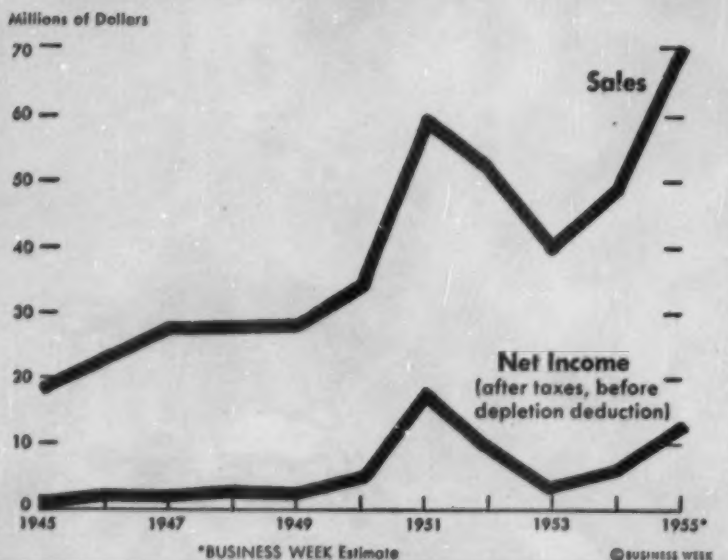
"MY BANK"
TO 2 MILLION CANADIANS



BANK OF MONTREAL
Canada's First Bank
650 Branches Across Canada
RESOURCES EXCEED \$2,500,000,000

New York: 64 Wall St.
San Francisco: 133 California St.
Chicago: General Representative's Office, 141 West Jackson Blvd.

One Reason for Diversification: To Smooth Out Cerro's Ups and Downs



faced the problems it has met in operating wholly outside the U.S.—and in a primitive, inhospitable climate. And few companies today are attacking their problems with more vigor.

I. An Asset Base at Home

Cerro de Pasco Corp., a New York corporation, has been mining nonferrous metals in Peru since the turn of the century. It's the largest industrial enterprise in Peru. At its many installations on the Sierra—at altitudes of 12,000 ft. to 15,000-ft.—Cerro has provided a livelihood for two generations of Peruvians. It must produce its own power, coal, transport, and raise much of its food across 1-million acres of company ranches; Cerro runs schools, hospitals, stores, veterinary clinics.

The company is U.S.-managed, and owned by some 6,100 shareholders, all but a handful in the U.S. The largest single block of stock—15%—is held by American Smelting & Refining Co.—the major partner, incidentally, in Southern Peru Copper. Total assets are carried on Cerro's books at close to \$140-million. Most of the assets, and all but 140 or so of its nearly 19,000 employees, are in Peru.

The conditions are stern, but the rewards can be impressive. Sales this year are heading for a record; net income should be the second highest ever (chart, above). As world markets for metals grow, Cerro prospers.

Yet it is not dependent on any one metal. Only in bismuth, and to a lesser extent in lead and silver, does Cerro

bulk large in the market place. Its copper (29,529 tons in 1954), zinc (nearly 17,000 tons), even lead (63,485 tons) can usually fit into the interstices of the world market without upsetting things. Cerro can be flexible, and sell wherever demand and price seem best. Indeed, it doesn't worry about a sales force. American Metal Co. Ltd., New York, acts as distribution agent for Cerro's major metals.

• **Smoothing the Bumps**—With ore left for many more years of mining, and with a hopeful market outlook, and stable relations in Peru, Cerro seems well off. Why, then, does it look to the U.S.—and to investments such as Circle Wire and oil partnerships in Texas, Illinois, Louisiana?

Cerro started as a miner, became a smelter and refiner, and now, according to Koenig, it's logical to become a manufacturer. Circle's business (six months' sales: \$11.4-million), plus oil earnings already trickling in, will help flatten out the bumpy fluctuations that afflict a cyclical business.

• **Complex**—There are more complex reasons for Cerro's diversification. Financing for the future poses a unique problem for a wholly-foreign-based operation, and Koenig and his colleagues felt they must build up an asset base in the U.S.

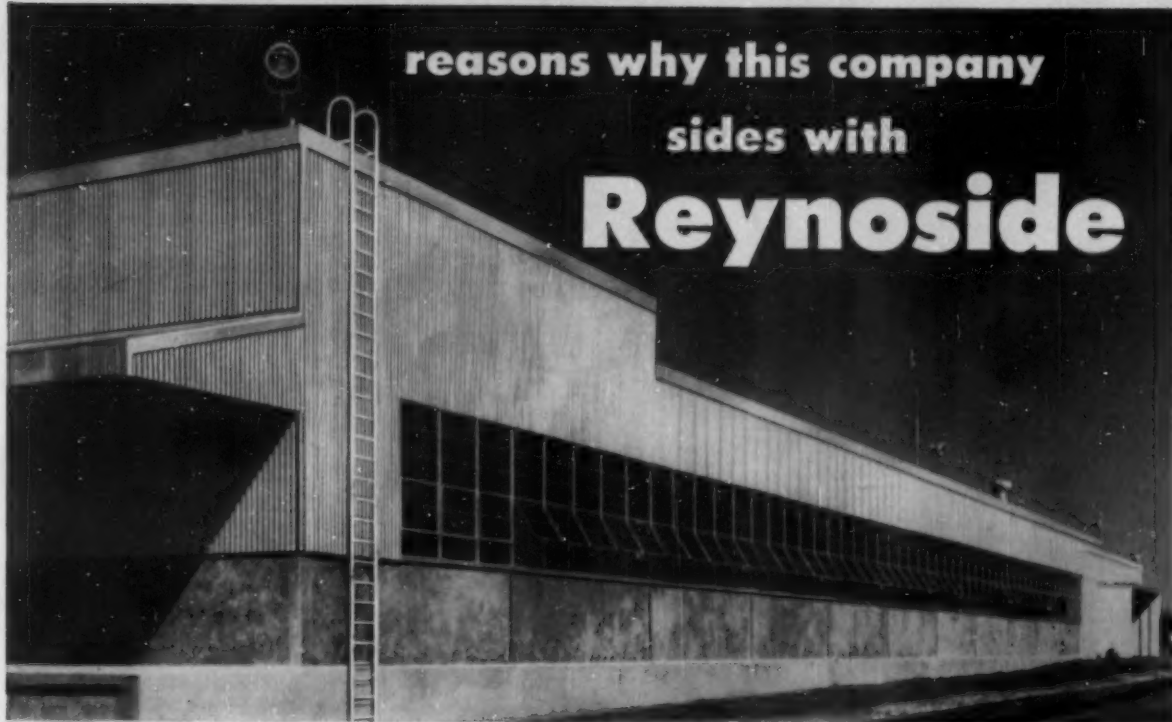
The U.S. investor or banker is dubious about financing ventures abroad—and especially in Latin America; a company like Cerro cannot always depend on such agencies as the Export-Import Bank. New overseas investment companies now being formed may be of

"Low-Cost and Maintenance-Free"...

reasons why this company

sides with

Reynoside



Low applied cost and low maintenance (no painting) are the principal advantages cited by Century Mfg. Co. of Jackson, Miss., for *Reynoside*... Reynolds *Lifetime* Aluminum ribbed-embossed siding. You can see another advantage in the photo... modern appearance. And the workers know still another... better year-round temperatures, because aluminum reflects radiant heat. Give this rustproof, corrosion-resistant material full consideration for your next building. Write for literature on *Reynoside*.

Architect:

John Turner, Jackson, Miss.

Jobber-Erector:

Nathan Daniels Roofing & Supply Co.,
Meridian, Miss.



A complete installation service is available. For name of nearest franchised jobber-erector, call the Reynolds office listed under "Building Materials" in classified phone books of principal cities. Or write to Reynolds Metals Company, Building Products Division, 2021 South Ninth Street, Louisville 1, Kentucky.

REYNOSIDE SPECIFICATIONS:

THREE TYPES:

(A) 4" rib, .032" thick. (B) 8" rib, .032" thick. (C) 8" rib, .040" thick. Rib depth, 1".

Finish: Stipple-embossed.

Lengths: From 5' to 14' 5½". Special lengths to order.

Width: 41¼" over-all; nominal coverage 40".

Weight per square: (A) 59.4 lbs.

(B) 53.1 lbs. (C) 66.4 lbs.

**REYNOLDS  ALUMINUM
BUILDING PRODUCTS**

See "FRONTIER," Reynolds new dramatic series, Sundays, NBC-TV Network.

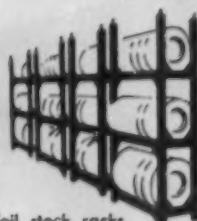
Racks



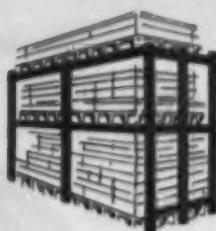
Rack with removable end frame



Rack with removable casters



Coil stock racks



Collapsible pallet storage racks



Racks are easily tiered

Store, stack and transport stock and parts with MHS Custom-Tailored Racks...

MHS Racks, engineered to your particular use, are efficient production tools. They simplify handling of parts and components for both production and shipping, increase storage capacity of present floor areas, minimize damage, promote safety, reduce confusion and clutter.

MHS racks are custom-tailored to handle pallets or any material from sheet glass to heavy, irregular shaped components. They stack securely, may be tiered as high as space permits. They may be portable, fixed, mounted on casters, or collapsible.

Here is a way to save space, labor, time and damage. Investigate MHS Racks. Write today for information.



Mechanical Handling Systems Inc.
AND SUBSIDIARIES

4610 Nancy Ave., Detroit 12, Michigan

Offices in Principal Cities

Factories: Detroit, Mich. • Fairfield, Iowa • Albany, N. Y. • Windsor, Ontario

some help in the future (BW-Oct. 8 '55, p. 28). But to raise money, increase and widen its stock ownership, Cerro feels it must have U.S. earnings.

Cerro executives complain about U.S. ignorance of Latin America, and a kind of provincialism even among bankers and businessmen. They are embarrassed occasionally when, on returning from a trip to Peru, friends ask: "How are things in Chile?" And when there is trouble in Ecuador, Colombia, or Bolivia, Cerro's stock on the New York market slides off—though it is involved only in stable Peru.

Less important, but perhaps a factor in the company's thinking, is its personnel problem. Life at 13,000 ft. on the treeless Andean plateau takes a lot of getting used to: It's hard, dreary, damp—especially difficult for family men. Turnover in U.S. personnel is high, and with a primitive work force, and not yet enough Peruvian technicians, Cerro must depend on outsiders. A larger U.S. operation will help Cerro rotate its people.

• **Spreading the Eggs**—Finally, there is the unspoken intention of Cerro to spread the geographical risk. All its eggs have been in the Peruvian basket. Admittedly it's one of the soundest baskets in Latin America; since the troubled days of the 1940s, Peru has established a climate for foreign investment second to none. But the nation is still largely primitive, in the early stages of political development. Peru has had its brushes with demagoguery. It would be pollyanna to insist that the foreigner will never have trouble there.

Right now, that's not even a remote prospect. Indeed, Cerro is adding more eggs to Peru, as well as creating new ones elsewhere. In a way Cerro is following the policy of W. R. Grace & Co., which in postwar years has built up U.S. investments that far outweigh, asset-wise, its original stake in Peru and Latin America.

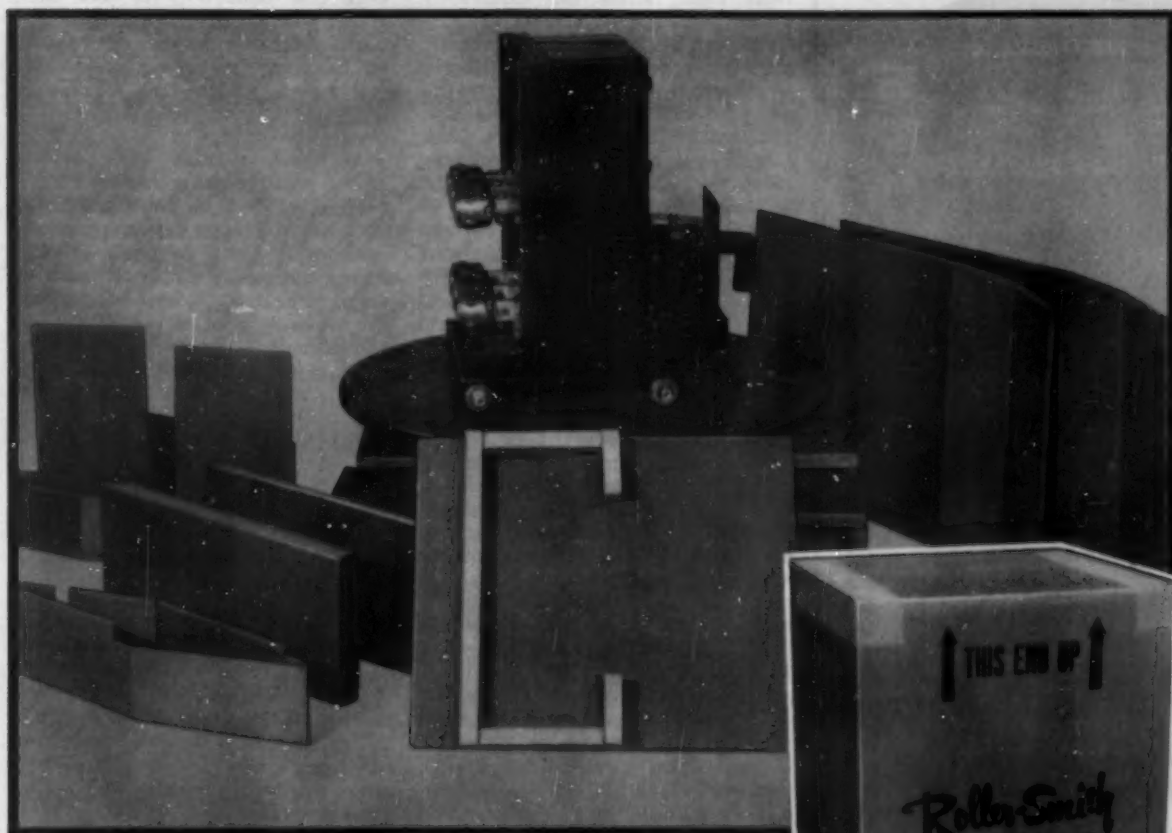
One day, Cerro may bulk as large outside Peru as inside. But for years ahead, it is committed to Peru.

II. Yankees on "the Hill"

And Peru is committed to Cerro. The company, through its own ores and those it purchases, provides 18% of the nation's exports, 10% of its dollar exchange, pays 5.3% of taxes, employs 50% of the total national mine labor force.

Some of the wealth of the Incas came from the Cerro de Pasco mine; later the Spanish conquistadores worked the district extensively. Between 1630, when the first records were kept, and 1900 some half-billion dollars in silver was mined at Cerro and nearby.

• **Opening Up**—At the end of the 19th Century, a railroad was built



CIRCUIT-BREAKERS are easier to ship since Gair container replaced wood crate.



Roller-Smith cuts packing costs 70%, shipping weight 27½% with new Gair Container

These percentages are based on actual time studies run by Roller-Smith Corporation, Bethlehem, Pa., on the packing of their heavy circuit breaker.

Cutting lumber, assembling a wooden crate and packing used to take 57 minutes. With the new Gair container the job takes only 17 minutes — a 70% reduction. Material costs also dropped 9¼%, and net shipping weight of the container plummeted 27½%.

What's more, the Gair container has chalked up

an excellent record for protection in transit, as well as guarding against loss of accessories often included in shipments. Extra dividends include:

- *advertising value of Gair's printing*
- *dust protection of Gair's sealed construction*
- *elimination of safety hazards in handling wood*
- *reduction of required storage space*

Maybe there's some way Gair could improve your product's shipping container. How about calling your nearest Gair container plant and finding out?

YOU'RE LIVING NEXT DOOR TO THE EXPERT

GAIR CONTAINER PLANTS: Atlanta, Ga. • Cambridge, Mass. • Cleveland, Ohio • Holyoke, Mass. • Jackson, Miss. • Los Angeles, Cal. • Martinsville, Va. • New Orleans, La. • No. Tonawanda, N.Y. • Philadelphia, Pa. • Plymouth, Mich. • Portland, Conn. • Richmond, Va. • Syracuse, N.Y. • Teterboro, N.J.



GAIR

SHIPPING CONTAINERS • FOLDING CARTONS
PAPERBOARD • KRAFT BAGS AND WRAPPINGS

ROBERT GAIR COMPANY, INC. • 155 EAST 44TH STREET • NEW YORK 17, N.Y.

SC 5.8

PYRAMID

Behind the scenes, what makes

5,000,000,000 dollar industry?

In electronic it is the prices of the many components that make the business of components. Among these Pyramid stands out. In years by a director in a circuit development a leading in quest of perfection in each in a vic and making Pyramid has developed a year's work in a 100% of electronic components. Even electronic components are calculated.

In determining your capacitor source for commercial or military use let success be your guide. Call on PYRAMID ELECTRIC CO. North Bergen, N. J.

from Lima, across the Continental Divide at 15,600 ft., and on to Oroya—still one of railroading's astounding engineering feats. James B. Haggin, an American mining financier, saw the possibility of opening the area to modern mining. In 1902, in New York, Haggin and a group of 10 investors raised \$10-million, almost overnight, to launch a company.

It took venturesome men to open the mines, train Peruvian Indians, work at an altitude that can give the strongest men "soroche," or mountain sickness. They were a hard lot. And Cerro prospered.

As the original backers died off, Cerro de Pasco became dominated more by estate lawyers than venture capitalists. The company was left to rock along on its existing mines. The policy was to get the ore out—and never mind the consequences, nor the Peruvians' objections. The Hill became the preserve of the disliked Yankee miner.

• **Repair**—Frank F. Russell, an administrator and financial man whose earlier experience was in the aviation business, became president in 1944. Cerro and Oroya were an industrial slum; both people and facilities were crippled by lack of maintenance. Russell set about repairing the damage, and repairing Cerro's relations with Peru. Russell, now board chairman, was the first president of Cerro ever to visit Peru in that capacity.

Peru itself was going through difficult times with a weak inexperienced left-wing government; its controls cut deep into Cerro's business. Then, in 1948, a coup mounted by Gen. Manuel Odría installed a benevolent dictatorship. On the advice of Washington economic consultants Klein & Saks, and with Cerro and other business people urging from the wings, Odría took the plunge into a free market, unhooked the currency, wrote model mining and oil investment laws.

Thus Peru freshened the atmosphere for investment. But much needed to be done to rejuvenate Cerro. It was decided in 1950 that the company needed a mining man, someone who could establish control over the operations on the Hill once and for all. Robert Koenig was hired.

III. Right Off the Dawn Plane

Koenig, at 51, is rangy, raw-boned, and intense—and not above outrageous puns ("It's heavier than you zinc.") He is a miner, and a Harvard man, Class of 1924. Koenig left Cerro in 1927 for "a better job" with Newmont Mining Corp. in Peru, later mined on his own there and in the U.S. There was a brief bout with investment banking at Lehman Bros. in the early 1930s, and then Koenig got into the

U.S. coal business. He took over, and rehabilitated, Ayrshire Collieries Corp. and, with time out for a stint on Eisenhower's staff in Europe as a coal expert, remained at Ayrshire in Indianapolis as president until the call came from Cerro.

• **On the Jump**—Koenig inherited one of the most complex mining installations in the world on the Hill; it hasn't been easy to change the habits and the methods in Peru. In terms of technology and mining efficiency, much remains to be done. Koenig has attacked the job with a lot of nervous energy, and tremendous capacity for work. He's often at the New York offices before 8 a.m., and more than once has upset the morning calm of Lima by arriving at the offices there right off the dawn plane from Miami and New York.

From Lima, Koenig hurries by car up the tortuous, breathtaking road to Oroya, usually arriving around 6 p.m. He goes to bed immediately (to become acclimated) and, propped on pillows, holds a levee a la Louis XIV with the Sierra staff. He has also instituted occasional directors' meetings on the Hill, hauling those directors whose doctors say it's O.K. across the Sierra empire for inspection. He is supposed to have once told the Sierra staff, arranging a directors tour, to "show them the lousy places as well as the good places."

• **Ambitious**—Koenig speaks with enthusiasm of the company's future in Peru as well as outside. Cerro is in the midst of an expensive and difficult zinc development program, an ambitious hydropower scheme, new metals development (cadmium, selenium, indium, thallium, tellurium, tungsten are all on the Cerro roster), new exploration. Koenig says the company is looking for oil and gas for its own power needs—but in the future he sees the base for a strong chemical industry.

And there's Toquepala, Cuajone, and Quellaveco—the monster copper deposits partly outlined by Cerro itself—now coming under development by Southern Peru Copper Corp.

• **Winning Friends**—Above all, Koenig is pushing partnership with Peru. Cerro now has a Peruvian public relations chief in Lima; in 1952 a distinguished Peruvian industrialist was elected to the board, and provision made for Peruvian shareholding. Cerro works closely with, and helps, the local mining industry.

Industrial relations, formerly an orphan on the Sierra, now bulks large. Peruvian technicians are being trained as fast as the scarcity of qualified people allows. And Cerro is trying harder to teach the often primitive Peruvian Indians that they have a stake and a future working at a job, living in a cleaner, more healthful Cerro facilities. **END**

NEW

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What's new under the Sun?

* * *

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Good in a tight corner. Polymekon®, a new kind of wax product manufactured by Warwick Wax, subsidiary of Sun, is hard and durable yet remains extremely flexible in thin films. Due to this unique filmforming quality, Polymekon protects bent corners and creases when added to wax coatings of paper cartons and containers. Now in full-scale production, this product of Sun research differs from other waxes in that it has certain characteristics of petroleum resins and highest melting petroleum waxes.

Better way to hold hands. Durable retention of a fabric's "feel" or "hand" is achieved by a new textile finish developed jointly by Sun Chemical and American Viscose Research. Called Prym-Avcoset, it makes viscose and viscose-blended fabrics crease-resistant even after repeated washings at 160°F. Prym-Avcoset also gives shrinkage control to 2% or less in all viscose and viscose-blended fabrics, and offers less than 5% loss of tensile strength by chlorine degradation.

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In Business Abroad

. . .

Another Aluminum Producer Sets Up Shop in Canada

There's to be yet another North American aluminum producer. This week, Premier Maurice Duplessis of Quebec announced that British Aluminium Co. Ltd. will build a 160,000-ton-a-year smelter at Baie Comeau, northeast of Quebec City on the St. Lawrence. The first stage of the project, some 40,000 tons of capacity, should be ready in 1957.

The British plant will be an important boost for Quebec's dreams of economic development (BW-Mar.12'55,p83). For Canada, it will represent the second aluminum producer; present capacity, over 500,000 tons, is all the province of Aluminium Limited, through its subsidiary Aluminum Co. of Canada. But the British won't offer much competition in North American markets. The world supply situation is tight, and British Aluminium will ship its ingot home for fabrication.

. . .

U.S. and British Companies Joust for Oil in Ecuador

A transatlantic battle for control of a Latin American oil property is under way. South American Gold & Platinum Co., New York mining and investment company (BW-Oct.8'55,p28), is jousting with London's Lobitos Oilfields Ltd. for the stock of Anglo-Ecuadorian Oilfields, which Lobitos originally formed.

The New York company has accumulated 10% of the Ecuador company's stock, and is the largest shareholder. Last week, South American Gold bid for the rest of the outstanding shares—offering the equivalent of \$7 a share. Lobitos, which still owns some stock in Anglo-Ecuadorian, countered with an offer that works out to about \$9.14 a share.

Now it looks as if the Americans will up their ante. South American Gold & Platinum already has interests in Ecuador and has high hopes for the country's future. South American Gold & Platinum maintains that the British management of Anglo-Ecuadorian, the country's largest oil producer (8,000 bbl daily), is—for a number of reasons—holding back the company's development.

. . .

Business Abroad Briefs

Canadian Petrofina Ltd., fast-growing offspring of the Belgian oil combine (BW-Apr.16'55,p170), may be planning a marketing foray into the U.S., perhaps with some Northeast service stations as a starter.

Harlow Curtice, General Motors boss now on his annual European inspection jaunt, announced another expansion for GM of France—\$4.5-million to increase Frigidaire production there.

A new airliner enters the turboprop sweepstakes. Vickers-Armstrongs Ltd., British producer of the highly successful Viscount, unveiled the Vanguard, to carry some 90 passengers 2,500-mi. nonstop at 400 mph. Production begins immediately.

OLD LEADERS—Herbert Morrison (glasses) and Clement Attlee represent policies that have lost popular appeal.



In Britain, Socialism Is Dying— Can Labor's New Men Revive It?

NEW LABOR HOPE—Hugh Gaitskell, 49, trounced left-wing Aneurin Bevan last week, has edge in race for leadership.



THE ANNUAL conference of Britain's Labor Party ended last week, as is its custom, with the singing of the Red Flag.

If ever there was a Labor conference at which this old Socialist anthem was out of place, it was this one. For a day or two Aneurin Bevan and his leftwing followers preached the traditional Socialist gospel. But their preaching had little effect on the party cohorts. In the end, Nye Bevan was brushed aside in a decisive party swing to the right.

• **How Far?**—It is too soon to say how far to the right the Labor swing will go. That is in the melting pot as the party searches, after its second defeat by the Tories last May, for a new leader, a new policy, and a new organization.

It is also too soon to say whether the Labor Party can hold together as it tries to formulate a policy to replace the one that has become largely bankrupt—a fix that Continental Europe's Socialist parties also find themselves in.

• **How Fast?**—But one thing is clear: By the time of the next British election, Labor's creed will be different from what it was between 1945 and 1951, when Old Guard leaders like Clement Attlee and Herbert Morrison (top picture) finally led their party to victory and to six years in power.

The change in creed would probably come faster if 49-year-old Hugh Gaitskell (picture at left) should succeed the ailing Attlee during the coming year.

But the change itself is inevitable, and the direction will be the same even if the 67-year-old Morrison manages to squeeze in for a short-term as party leader.

I. Receding Tides

The Attlee brand of Socialism had its roots deep in 19th Century British radicalism, and to a lesser extent in Marxism. Out of this ideological background and the economic circumstances of World War II and its aftermath, Labor evolved a Socialist program that had three chief elements:

- The welfare state or "national minimum"—a government guarantee of economic security with the cost largely borne by the national budget.

- Central planning and control of the economy, including foreign trade.

- Nationalization—public ownership and operation of basic industries.

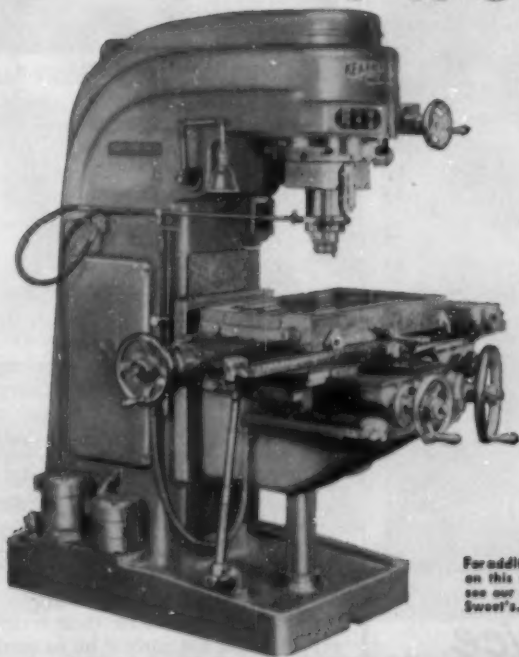
Each of these was carried a long distance while labor was in office. Each was backed by a tide of public emotion that followed World War II. With a government of their own in office, British workers saw a chance to get a bigger share of the national cake, and to get protection against poverty, old age, and illness.

- **Miscalculations**—Even when these aims had been largely achieved, Bevan thought he could keep the tide rolling on—and ride it to the leadership of

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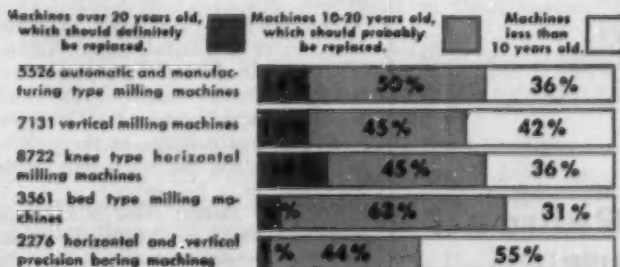
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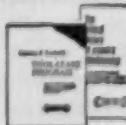
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Figures adapted from 1953 American Machine survey of Metalworking Industry.



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LABOR DIPLOMAT: Britain's Alfred Robens, former labor minister, might get Foreign Office if Labor wins again.

the party. He did his best to keep the Socialist momentum going, calling for more nationalization and a further division of wealth.

But Bevan miscalculated on two counts.

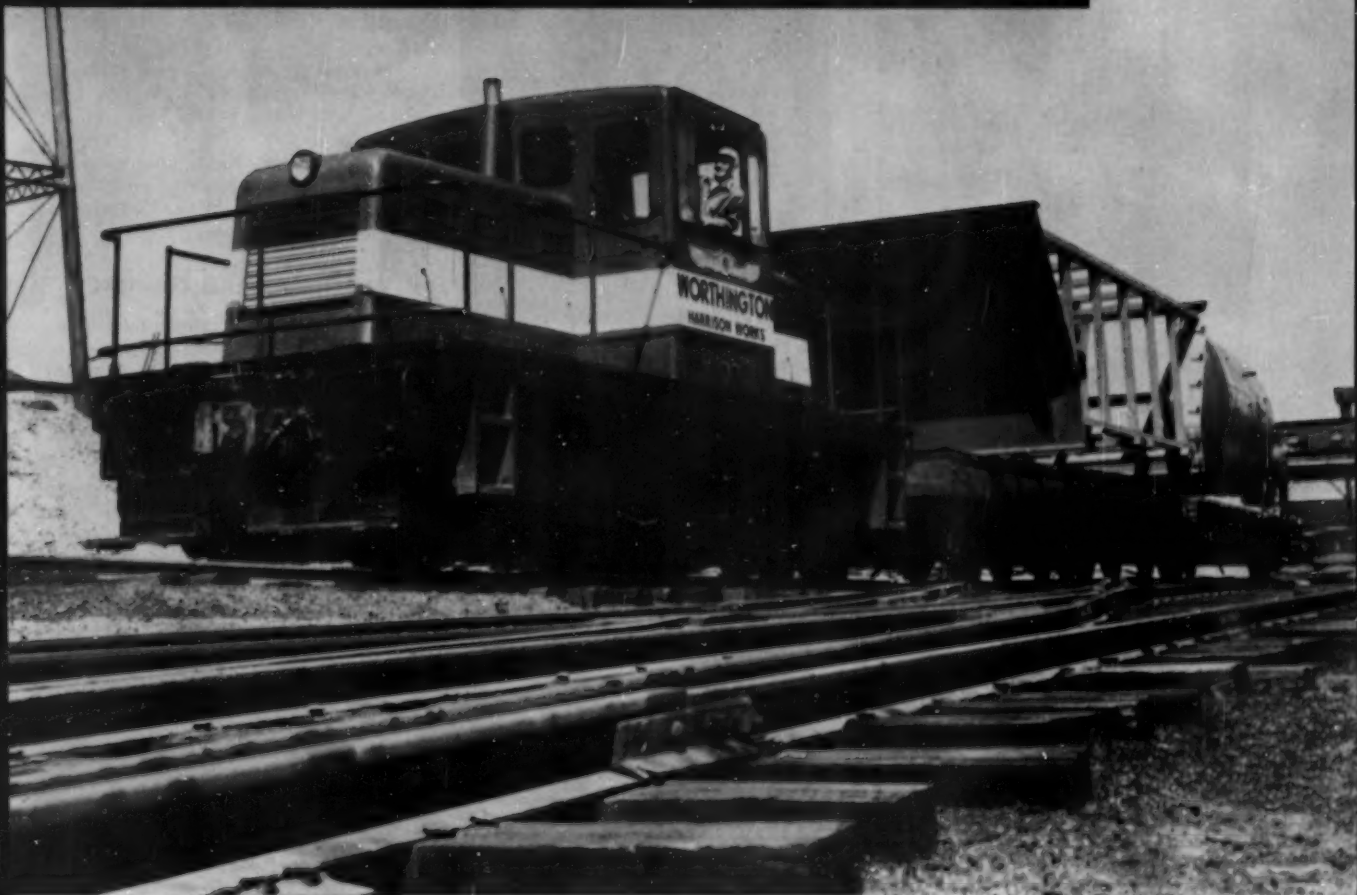
First, he antagonized the big trade unions, which supply most of the funds for the Labor Party. The unions had long been a conservative element in the party, and they grew more conservative as a Labor government struggled with Britain's postwar problems. By 1951 their influence was all on the side of gradualism, and specifically against any more experiments with nationalization. Last year, when Bevan made a desperate bid to get in line for Attlee's succession, the trade unions threatened to withdraw their financial support from the party if he succeeded.

Bevan also mistook the temper of most Labor voters during the past year or two. That came out recently in a post mortem report on the May election, prepared under the direction of Harold Wilson, who had been a political buddy of Bevan's until recently. Wilson's report, which recommends a drastic reorganization of the party machinery, reveals that the old Labor policies no longer interest young Britons.

• **Hollow**—This isn't news to many observers of the British scene. Nationalization had brought no miraculous change in British industry, least of all in coal. Prosperity under the Conservatives, plus continuation of the welfare state, had made the old Labor battle cries ring pretty hollow.

Today in Britain there is hardly a trace of poverty in the prewar sense. Low-rent houses are available for workers. Employment is so full that

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this way: "The performance of our G-E diesel-electric has exceeded every expectation."

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PARTY BUILDER: Harold Wilson calls for drastic rebuilding of British Labor Party setup—and aims to do it himself.

workers are wooed by employers. And wages are high enough so that workers can give their wives the kinds of household durables that were scarce even in middle class households before World War I.

II. Wanted—a Program

Under conditions like these, Labor doesn't seem to have much room for a political program—except one consisting of “We can do it better” slogans. That's about all that Labor can or will say about running the welfare services and the industries already nationalized.

But there is still the third element in British Socialism as it was practiced by the Attlee government—central planning and control of the economy. The new crop of Labor leaders, included Gaitskell, Wilson, Alfred Robens (who is a potential Labor foreign minister), and others, think they can come up with a new program in this area that will have political sex appeal and make economic sense.

• **Hatching an Idea**—In the embryo stage, the idea seems to be this: Private business in Britain can't be trusted with the important economic decisions that determine the level of economic activity and the rate of productivity, especially decisions about prices and capital investment. This is proved by the economic troubles Britain is having today under the free market policy pursued by the Tories. Instead of leaving things to private business for decision, control boards, similar to the Iron and Steel Board, should be set up over other key, non-nationalized industries—chemicals, autos, machine tools, electrical equipment, shipbuilding.

The new Laborites would also go in for a lot more planning and control of British foreign trade. They think that Chancellor R. A. Butler has made a big mistake in going as far as he has in freeing British imports.

• **New Appeals**—This group also is kicking around some ideas that might appeal to traditional voters. There is talk of:

• Finding a profit-sharing formula that would go down with the big unions, which don't like Tory profit-sharing plans.

• Increasing the influence of unions in management—something along the lines of West Germany's “codetermination” system.

III. Machines and Leaders

Last week's Labor conference gave the party's executive—its ruling body—the job of formulating official policy on a whole range of economic and political questions. The executive is supposed to come up with the answers during the next three years.

The conference also gave the executive the green light to follow up the Wilson report recommendations on party reorganization. These boil down to a call for a well-paid, professional party machine.

• **Rivals**—Wilson apparently aims to take charge of this job. No doubt he thinks this is the way he can build for himself the kind of strong position in the Labor Party that Butler built in the Conservative Party. Probably he also expects to be Chancellor in the next Labor government.

That was a position he coveted when he and Gaitskell, both Oxford-trained, were proteges of the late Sir Stafford Cripps. But Gaitskell pushed ahead of him, and got the job.

Whatever Wilson's ambitions may be, Gaitskell now holds the lead for Attlee's succession. He demonstrated his strength last week by soundly trouncing Bevan for the party treasurer-ship. But Gaitskell has a rival—Herbert Morrison, who has waited 20 years for the job. With Attlee's retirement, which is expected within a year at most, Gaitskell must either beat Morrison out or risk being pushed aside in the new fight that would be sure to develop for Morrison's succession.

• **Fighting Chance**—If Gaitskell and his team take over, they will have at least a fighting chance to rebuild Labor's strength around a new program. About half of Britain's voters are ready to vote Labor if the party shows any signs of going anywhere. But Britons don't relish another round of the kind of social revolution that the Attlee government gave them. If labor returns to office it will be with a new brand of Socialism. **END**

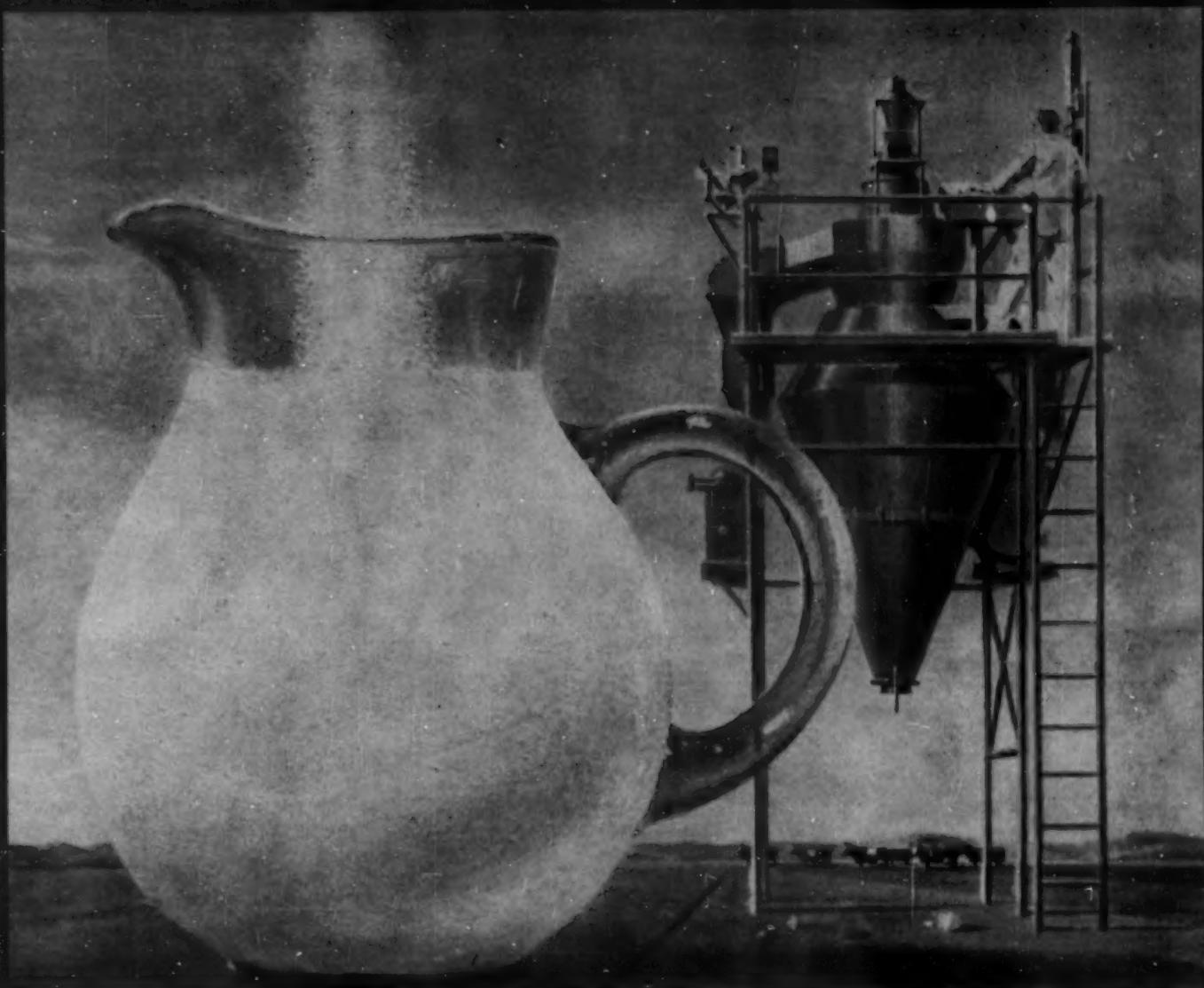


Illustration by Walter Murch

when instant means as quick as a flash

Powdered milk has had one major drawback — the relative difficulty of mixing the powder with water — any water, hot or cold. Even today, in some instances, electric mixers, rotary egg beaters or shakers generally have to be used to hasten dissolving the powder in the liquid.

However, "instant," as it now applies to powdered food products, has been speeded up. Blaw-Knox engineers, of the Dairy Equipment Division, have developed a revolutionary piece of equipment, called the

"Instantizer." This machine produces powdered milk that dissolves immediately on contact with water. "Instant" now means "as quick as a flash," not only for powdered milk but for other powdered food products — as cocoa, coffee, puddings.

This is but another example of Blaw-Knox engineering achievements that are helping to improve products, increase productivity, lower costs, save time. The list below is indicative of the broad scope of Blaw-Knox activities.

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Piping and Sprinkler Systems: Pressure piping and automatic fire protection systems for chemical and power plants, steel mills, oil refineries and for process industries generally

Construction Equipment: Road building black-top and concrete pavers, spreaders, finishers, subgraders, rollers, truck-mixers, road rolls and aggregate concrete mixing equipment; heavy forms (for subways, tunnels, dams); clamshell buckets

Towers: Radio, television, microwave, power transmission

Ordinance: Anti-aircraft gun mounts; armor castings for tanks



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Teetering India

Both sides score in struggle between free enterprisers and state capitalists. Companies Bill a major issue.

The seesaw battle between free enterprise and state capitalism in India goes on. Events have chalked up victories for both sides. And the battle is getting warmer as the government prepares to announce formally its Second Five-Year Plan in December.

Haunting all Indian business is the gloomy spectre of the Companies Bill now being drawn in the parliament (BW-Jul. 31 '55, p90). It is primarily aimed at regulating India's managing agency companies, long a target for nationalists, who regard them as relics of India's colonial past.

• **Crippling**—But as the bill stands now it would severely cripple all kinds of corporate organization. For example: it prohibits a managing director (equivalent of president in a U.S. firm) from serving more than one company; no managing director may have his salary altered without government permission; the government may insist on examination by a committee of outsiders—government appointed—if 10% of the stockholders demand it. A new government department would be set up to administer the acts 80-odd separate powers over business.

Meanwhile, on the brighter side, Indian businessmen—and Liberals—are taking satisfaction from the bad reception the "plan frame" of the Second Five-Year Plan has received. Chief author of the "frame," an outline from which the eventual detailed plan will devolve, is P. C. Mahalanobis, head of the Indian Statistical Institute. Mahalanobis is considered by many in India to be at best a planner with little regard for human beings, and at worst, a Soviet sympathizer.

• **12-Million Jobs**—His plan outline included a target of 12-million new jobs by 1961—a goal that many Indian and Western economists have pointed out could only be attained by totalitarian methods. The outline raised an uproar in the Indian press and among Indian parliament members—including Socialists as well as more conservative Congress Party members.

It now looks as if Prime Minister Jawaharlal Nehru has kicked Mahalanobis upstairs to head so-called "long-term planning." Meanwhile, the year-to-year planning will probably be entrusted to Planning Minister Gulzarilal Nanda, a Congress Party member of the cabinet. **END**

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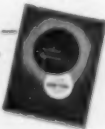


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INTERNATIONAL OUTLOOK

BUSINESS WEEK

OCT. 22, 1953



Has Russia decided to compete with the West in developing the economically backward countries?

If you can believe the Egyptian ambassador in Washington, Soviet propaganda, and reports from the Middle East, Moscow is ready to lend about \$500-million for development projects in this area.

Add this—if it's genuine—to the steel mill project the Russians have taken on in India, and you would have something for the West to think twice about.

Biggest of the Middle East schemes is Egypt's Aswan High Dam, on the Nile River, which the World Bank has been investigating since 1953. Moscow says it is ready to contribute \$200-million in equipment and engineering, with easy interest and repayment terms.

In the rumor stage are Soviet offers to help with the Jordan River development scheme and a similar water project in Lebanon.

Washington is inclined to regard the whole business more as a bluff than anything else.

U.S. officials don't think that Moscow has any intention of supplying the equipment and personnel for such jobs—not while it is desperately trying to double its own electric power capacity within the next five years.

Judging by the experience India and Afghanistan have had with large-scale Soviet aid plans, Moscow can't deliver.

Whether it's a serious economic game or not, the Russians already have thrown a monkey-wrench into the Jordan Valley scheme.

The final agreement needed to give this project a green light was set for signature last week. Then came the clamor about Moscow's offer of arms and aid to Egypt. And the two Arab partners in the scheme, Syria and Trans-Jordan, decided to stall.

London is more alarmed than Washington about Moscow's Middle East offensive. British officials think the Russians mean to penetrate the entire Moslem world from Pakistan to Morocco—an area that has been a Western sphere of influence since the beginning of the century.

What worries the British most is the threat to vital oil resources.

Cotton is a big factor in the game Moscow is playing in Egypt. Cairo has been turning increasingly to the Communist world to find markets for its raw cotton.

Communist countries are now buying about 25% of Egypt's cotton exports. (Last year the figure was 10%.) And Moscow apparently has offered to accept repayment in cotton and rice for the financing involved in any deal on the Nile Dam.

Washington knows, of course, that U.S. cotton policy doesn't help any in a situation like this.

—•—
This weekend the Saarlanders go to the polls to decide an important issue—whether their little country is to move politically under the wing of the Western European Union while remaining economically attached to France.

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK

OCT. 22, 1955

At midweek, it seemed certain that a majority would reject "Europeanization." Saarlanders, who are German, look forward to rejoining Germany at some time. They don't want to okay the present tie-in with France, even if it has a European mantle over it.

If the Saar question is tossed back to Paris and Bonn again, French Premier Edgar Faure will have just one more headache.

This week Faure survived a confidence vote on Algeria. But his position is as shaky as ever.

With France standing on the verge of disaster in North Africa, the political confusion in Paris couldn't be worse.

Note these straws in the East-West trade winds:

Red China opened a long-heralded trade fair in Tokyo this week. And many of the 3,000-odd items on display gave Japanese businessmen pause.

An exhibit of textile machinery, for example, makes it clear that China might one day cut into Japan's own overseas markets. At the least, the display advertises the fact that Communist factories can make their own.

Ladies in Leningrad may soon sport Bond Street fashions—in readymades.

The buyer for a Leningrad clothing store turned up in London last week, ordered a substantial quantity of smart readymades—38 styles, in thin wool, silk, jersey. (London retail prices on the frocks work out to about \$26.50 each.)

U. S. business abroad is holding up nicely. Third quarter exports, seasonally adjusted, are higher than for the same period in 1954. It looks now as if fourth quarter sales abroad will remain high.

Washington experts don't expect U. S. sales in Europe to be severely affected by the new deflationary doses being administered by some governments there, notably in Britain. The bulk of our European business, these observers say, is in raw materials and semi-finished goods. As long as production remains high, they'll be needed.

Of course, there may be a fall-off in finished goods sales in Europe. And the experts may be too optimistic on the over-all export outlook—especially in the case of Britain.

News was flashed at midweek that Chancellor of the Exchequer R. A. Butler will bring down an "autumn budget." That means new taxes will be included in the measures Butler plans to use in clamping down even more on the British economy.

The idea, in Britain as elsewhere, is not to cut production, but to rein in home demand and so free more goods for export. But tight money can't help but put a damper on all business. At least temporarily.

The result might well include not only a slight drop in U. S. business in Europe, but also stiffer competition in third markets like Latin America and Asia. Expect Britons and others to push their own exports harder than ever.



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Can there be one person alive in this country today who does not own at least one ball-point pen. *Not you?* Very well! Then did you ever wonder why these pens write so well . . . last so long . . . cost so little? One of the main answers is Brass. For the golden-yellow alloy is the production expediter that enables one manufacturer, for instance, to turn out hundreds of thousands of pen-barrels a day on eyelet machines with Bristol Brass Strip.

And this manufacturer does equally well with the self-ejecting collars for cigaret lighters for automobiles. For here again Bristol Brass Strip is the ticket to production and profit in the rapid-fire automation of precision eyelet work . . . just as it is for many other types of work involving forming, stamping, spinning, turning and heading.

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At top, Rotating pen point sleeve and pen barrel. Below: Self-ejecting collar for automobile dash cigaret lighter.

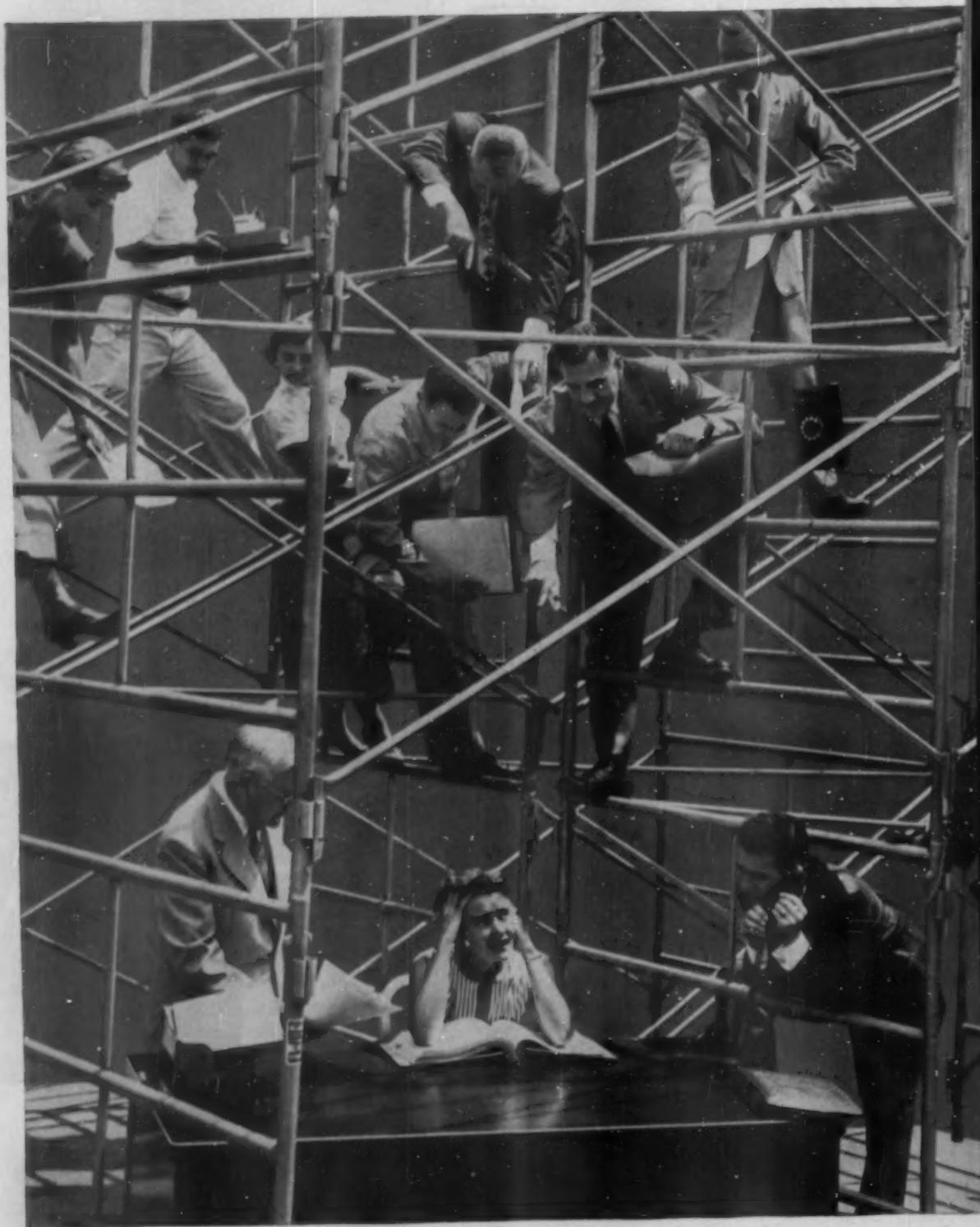
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*Ratio-delay studies accurately rate operating efficiency. Typical studies showing how VMP MOBILWALLS increase productivity are available on request.



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In Ohio, UC Goes to the Polls

● Action by voters will decide whether SUP will be integrated with state jobless benefits, whether unemployment compensation is a matter for public vote.

● If labor-sponsored petition wins, UC taxes paid by manufacturers will more than double, and Ford-GM SUP contract provisions will take effect nationally.

● Labor and business campaigns for and against the proposal gather momentum as Nov. 8 election nears.

It has been a long time since any responsible spokesman openly questioned the principle of unemployment insurance. After a protracted and heated public controversy, in which its opponents maintained that any system of payment during workless periods would be an incentive for shiftlessness, the principle has come to be almost universally accepted.

But fears that some direct relationship does indeed exist between unemployment compensation and a preference for idleness continue. As a consequence, UC remains an embattled issue. The fight now turns, however, on questions concerning the level of benefits and the conditions under which they will be paid. And for the most part, it's a fight that sees a pretty consistent line-up of organized labor on one side—intent on raising benefits and distributing them liberally—and organized business on the other. Just now that fight is boiling up with new fury in Ohio.

• **New Issue for Voters**—UC always has been an explosive issue between labor and industry in Ohio; more so, perhaps, than in other states. It has come to the point now where that issue is being taken to the electorate for decision in a statewide election on Nov. 8. That election will decide these questions:

• Whether Ohio will legalize the payment of supplementary unemployment pay (SUP) concurrently with unemployment compensation.

• Whether what have always been administrative and legislative questions—benefit levels, duration of payment, and the like—will be decided by direct public vote.

These two questions will stand or fall together next month. Both organized business and organized labor are spending considerable money on campaigns that will become more intense.

• **Possible Effects**—But Ohio's problem

is far more complicated than these issues suggest. For example, if voters O.K. the initiative petition that organized labor fought hard to get onto the Nov. 8 ballot:

• Ohio manufacturers will find their unemployment compensation costs more than doubled.

• The supplementary unemployment pay provisions of the Ford and General Motors contracts will take effect nationally.

• Labor will have demonstrated a new technique to win directly from the public advances it can't win from legislatures.

I. The Background

It's highly unusual to have a direct public vote on so detailed and complicated an issue. Naturally, it didn't happen by accident.

A year ago, Ohio organized labor was gathering signatures for a petition to the 1955 Ohio legislature. It asked numerous sweeping changes in the state's unemployment compensation program. For example:

• Maximum benefits would rise from \$39 to \$59 weekly, minimum from \$10 to \$15.

• Benefits would be payable for 39 weeks, rather than 26.

Ordinarily, such detailed revisions of so technical a law would be left strictly to the legislature. But Ohio union leaders—particularly the state CIO, which is spearheading this movement, with AFL support—have felt for some time that they cannot get adequate unemployment compensation programs through the Ohio legislature. Thus, in mid-1954, they were paving the way for a public vote in 1955.

Ohio law requires that a petition must go to the legislature before being placed on the ballot. So, when the petition failed to pass at Columbus early

this summer—as labor anticipated—the unions went back for enough new signatures on the same petition to get it on the 1955 ballot. A month ago, they succeeded.

• **Providing for SUP**—But when they were drumming up signatures for the legislative petition in 1954, Ohio labor leaders included in their petition an issue that had not yet arisen.

Specifically, the petition also provided that payments made by employers to unemployed workmen under negotiated contracts would not be considered as remuneration. That issue was vital, for ordinarily state unemployment compensation payments are denied to people getting any money from employers. This policy conflicts with guaranteed annual wage plans generally, and specifically with the SUP program negotiated in the auto and other industries earlier this year.

In mid-1954, of course, no one knew that the problem would evolve as it has, starting with the Ford and GM contracts negotiated last June. But everyone knew that GAW would be the big labor issue in 1955. Thus, labor people knew they must find a way to accommodate simultaneous payments to jobless from both GAW and state-administered unemployment compensation programs.

• **Added Meaning**—Hence, as the GAW drive evolved into supplemental unemployment payment plans, that portion of the Ohio petition became a vital one. For both the Ford and GM contracts contain clauses requiring favorable rulings on this point from states in which two-thirds of the hourly paid employees of both companies work. Today, the Ohio petition commands both contracts. Here's why:

Michigan, whose Attorney General has ruled that SUP and UC payments may be made simultaneously, has 44% of all GM hourly workers, 56% of all Ford hourly workers. New York, where a similar, though tentative, ruling has been made, has 15% of GM workers, 4.3% of Ford people. Ohio has 17% of GM people, 11.8% of Ford production workers.

So, if Ohio voters O.K. the petition Nov. 8, states employing well more than two-thirds of the Ford and GM workers will have validated the concurrent payment of UC and SUP benefits. Rejection of the petition in next month's election will not kill SUP conclusively in Ohio. Theoretically, at least, the Attorney General could still come up with an interpretation of the

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present statute that could accommodate SUP and UC.

Depending on whom you talk to, you can get all manner of answers on the significance of this use of the initiative petition.

II. The Significance

The Ohio Information Committee, spearheading the employers' fight, says the device is being used in a way that was never intended. It says labor is bypassing the legislature.

CIO people will tell you that it's simply a means of getting Ohio unemployment compensation benefits and regulations up to acceptable levels. This, they insist, they have been unable to do legislatively even though the 1955 session raised benefits and six of the last eight legislatures did likewise. Even so, CIO people insist, the percentage of a man's pay that he can draw when he's unemployed has sagged from 55% in 1939 to 38% today. They say the petition merely aims to restore 1939 standards.

- **Cost to Employers**—What this will mean to Ohio employers if the petition passes is plain. In 1954, which saw a fairly severe drain on UC funds, UC taxes on Ohio employers averaged 61¢ per \$100 of payroll. Nationally, employer UC taxes averaged \$1.12 per \$100. In neighboring Michigan, a state with which Ohio competes industrially and for automotive industry expansion, the 1954 rate was \$1.30 per \$100.

Ohio law requires the state treasurer to compute the cost of measures that go on the ballot by petition. He has calculated the cost of the pending UC enlargement at \$47.5-million per year. That figures out to an additional 70¢ per \$100 of payroll.

III. The Battle of Words

The struggle to sway public opinion that is being waged by the Ohio Information Committee and the labor people is heating up now. Thus far, both sides agree, not a great deal has been accomplished, considering the nearness of election day. And both agree it's pretty late in the game to be getting up to speed.

OIC's program was delayed by the unions. It found great difficulty in raising money from employers until it was certain that the petition would in fact appear on the Nov. 8 ballot. That wasn't assured until mid-September. Thus, although various trade associations had been hammering away at the potential danger for 18 months, OIC itself—and its local committees—were able to do little until this month.

- **Business' Campaign** — OIC's campaign is rolling now, though. Executive Secy. Fred J. Milligan hopes to raise

a total of \$350,000 and has raised most of that. As October opened, with all the overhead expenses of the campaign in hand, OIC placed \$100,000 worth of advertising contracts. The budget called for \$75,000 for newspaper advertising, \$70,000 for TV—mainly in spots—and \$40,000 for radio.

OIC people say frankly that they'll have to campaign on an emotional level. They give these reasons why:

- The campaign was late getting started.

- Unemployment compensation is far too complicated—and the time is far too short—to permit a campaign designed to educate the public on UC's complexities and implications.

- They say the labor people are plugging the fact that Ohioans can add \$20 per week to their unemployment compensation benefits at no cost to themselves.

- **Appeal to Voters**—Thus, OIC literature emphasizes the fact that the Ohio legislature has consistently raised UC benefits. It alleges that the CIO is trying to take over responsibility for running the state. OIC urges voters not to raise benefits so high that it's as attractive to be jobless as to work. It suggests that the petition would make "special privilege workers" out of the 125,000 or so Ohioans who are now governed by SUP contracts, "while making 'second-class citizens' out of union and non-union employees not so covered." It warns that the cost of the enlarged program will indeed be borne by all citizens even though only employers pay the tax.

OIC is backed by 35 to 40 statewide trade associations, a dozen of which are represented on its operating committee. Thus far, it has had strong financial support from what it calls "dispersed employers"—those headquartered out of the state but operating within Ohio. Several companies that have already signed SUP contracts have contributed to OIC. This at least raises the point as to whether they are fighting validation of concurrent SUP and UC benefits or more-than-doubled costs of unemployment compensation at their Ohio properties.

- **Labor's Campaign**—Jacob Clayman, Ohio CIO director who's running the labor campaign, plays it down more than you might expect. He says he'd "like to have" \$150,000 for the campaign, emphasizes that he doesn't have it yet, adds that union locals have been solicited. The labor campaign, he says, naturally will revolve around getting the labor story to the labor people—"in the local union halls, in the shops, the common chatter of election time." And, he says, labor will have "some literature—an ad here or there or some radio here or there, and more ads and more radio if we have the money."

Unlike the OIC people—who say they just don't know, now, how the vote will go—Clayman says it depends on whether Ohio working people vote at all.

"If the ordinary working folks are moved to come out and vote," Clayman says, "we'll win even if they spend \$5-million."

Meanwhile, the Republican and Democratic parties in Ohio have stood aloof as have most of the state's politicians. They seem to figure this is a private fight that they'd rather duck.

Test of Strength

First opposition in 18 years of steel union voting will show David McDonald's present standing in USW.

Serious political contests are rare in major unions. Ordinarily, union officers are elected by a cut-and-dried convention vote—in which few rank-and-filers can participate. The candidates are almost always incumbent officers and, when there are vacancies, they have their handpicked nominees. Opposition seldom develops.

But next week, for the first time in 18 years, members of the United Steelworkers (CIO) will have a chance to cast ballots in a union election in which there will be opposition to administration-endorsed candidates.

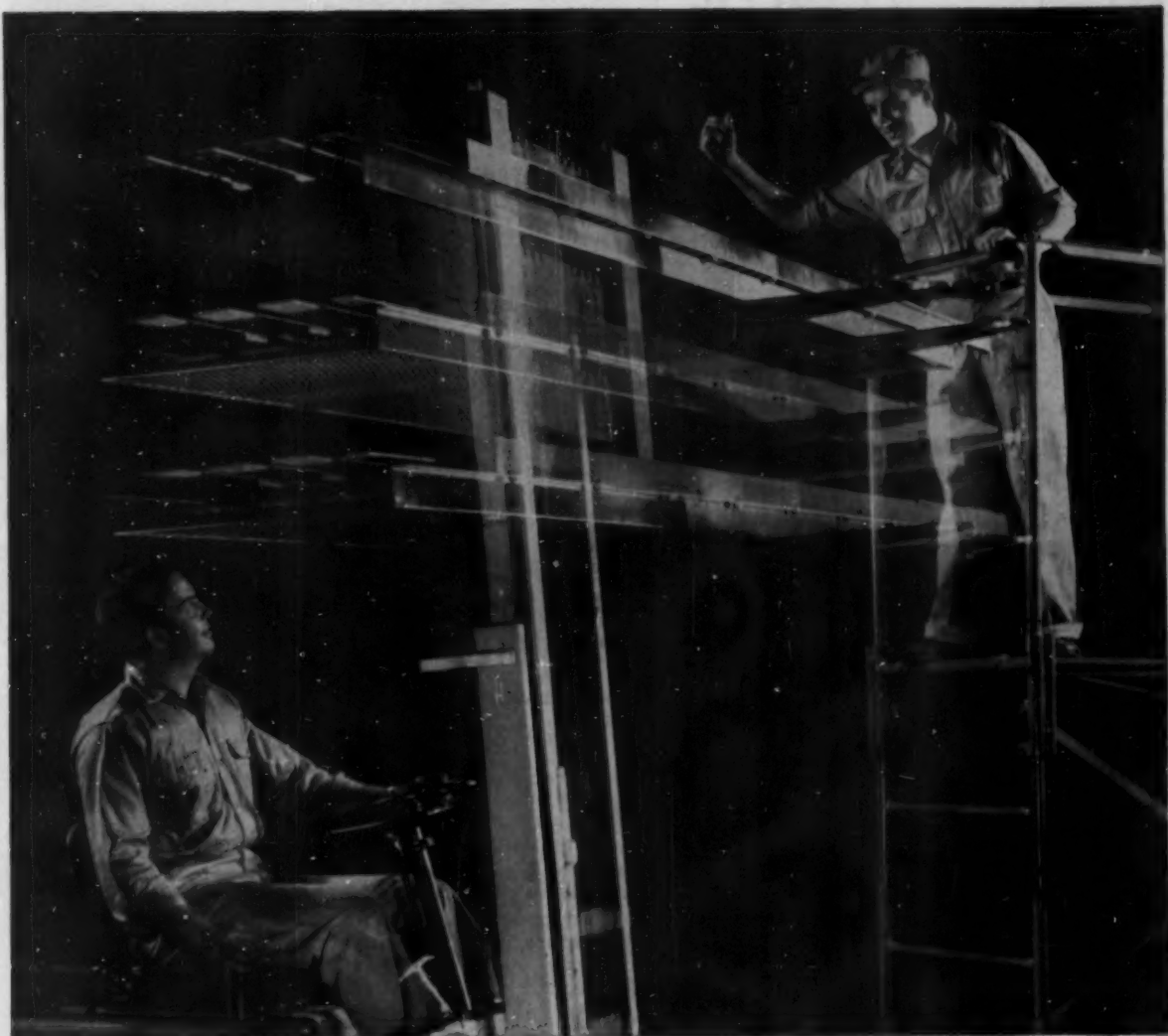
There is little doubt of the outcome—an administration victory—but considerable interest is being shown in the strength of the opposition to David J. McDonald, USW's president since 1952.

- **Contestants**—McDonald appointed Howard R. Hague, a long-time friend and McDonald's personal assistant in USW, as vice-president of the union after the death of James Thimmes last March. The executive board approved the appointment in a 22 to 9 split vote.

McDonald promised a special referendum election. Joseph Molony, director of USW's New York District 4 since 1942 and a CIO steel organizer for five years before that, announced that he would oppose Hague in the election "at the urging of my friends in the union."

Light opposition to McDonald in USW has rallied around Molony for two years.

Voting will take place Oct. 25 in more than 2,000 local union halls across the country. Pre-election odds strongly favor Hague, who had "nominating" support from 1,527 locals to Molony's 540.



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Help for a Hard-Hit Boss

That's one aspect of pay cut that Electric Auto-Lite's Toledo employees have taken. Another aspect: winning a pledge that operations won't be shifted elsewhere.

For five years, boom in the nation's automobile industry bred boom for Electric Auto-Lite Co. As supplier of more than 400 products for cars, trucks, tractors, boats, and airplanes, the company prospered between 1948 and 1953. The accounts for 1953 showed that plainly: Profits for the year stood at more than \$10-million. Auto-Lite employees' pay envelopes showed it, too: At four big Toledo plants where more than one-fourth of the company's 25,000 production employees are concentrated, workers averaged around \$2.93 an hour.

But in 1954, Auto-Lite ran into trouble. Profits that year fell from the more than \$10-million mark down to only \$714,000. This slump for Auto-Lite was bred largely by the slump that hit Chrysler Corp., one of its big customers.

• **Way Out**—But there was more to it than just that. And, last week, Auto-Lite was guessing that it had found its path out of the woods when it won a seven-month fight for "competitive" labor costs. Employees in Toledo, represented by the United Auto Workers (CIO), accepted—reluctantly—incentive plan revisions that will cost them an estimated 38¢ an hour.

• **Cost Cutter**—The man behind the economy program is James P. Falvey, who took over as president of Auto-Lite after the death of Royce G. Martin in 1954 (BW—Jun. 12'54, p44).

He came to the showdown in his cost reduction battle in March, when he unfolded a broad plan to cut labor costs in the four Toledo plants. There, Auto-Lite had boosted output through the prosperous years by giving workers big incentive pay concessions.

Falvey told the Toledo workers that Auto-Lite's costs in the auto electrical system line (concentrated in Toledo) were far out of line with those of its chief competitor, General Motors Corp.'s Delco-Remy Div. "If our costs continue at their very high levels," a prospective 1,000 new jobs as well as "the jobs for our present work force are in jeopardy," he said.

Falvey asked UAW and Toledo workers to accept:

• A revision of the Toledo wage plan, including a complete job evaluation and new time studies.

• The right of management to reassign to other jobs those workers who fail to produce enough pieces (under an incentive plan) to earn their specified

base wage; also, management's right to discharge those who cannot be placed in a job they "are able to perform . . . efficiently." This was, in effect, a bid for changes in the seniority system which, Auto-Lite complained, opened loopholes for excessive labor costs.

• Elimination of extra allowances for non-productive time.

• **Rejection, Then Talk**—Although UAW had accepted the reality of other competitive cost-price squeezes in Toledo—notably in dealing with Willys Motors (BW—Apr. 24'54, p144)—it initially rejected Auto-Lite proposals.

For six months, talks were held from time to time without breaking the im-

asse. Then, about a month ago, Falvey warned Auto-Lite might have to move at least part of its operations out of Toledo. This spurred new efforts to resolve differences. Auto-Lite modified some of its proposals, but stuck pretty close to original plans for revising incentive pay and retiming production jobs. UAW international officers recommended concessions, and workers voted 1,282 to 700 to accept them. In return, Falvey pledged that work would not be moved from Toledo "as long as production costs . . . remain competitive."

Under the new incentive plan, according to a union spokesman, workers will average about \$2.55 an hour. This rate is still above earnings reported for Delco-Remy, but 38¢ an hour less than the pay they've been averaging.

• **Another Case**—A week before the Auto-Lite settlement, UAW approved a similar revision of incentive rates for the Doehler-Jarvis Div. of National Lead Co., in Toledo and three other cities (BW—Oct. 15'55, p57).

Slow Bargaining for Studebaker

Past concessions on wages and seniority come back to haunt both the company and the union local.

Only one labor contract with an auto manufacturer remained unnegotiated this midweek—and if the United Auto Workers (CIO) and the Studebaker-Packard Corp. seemed to be dawdling over it, there was a reason. Both sides were trying in one bargaining to clear up complex labor problems that were eight years in the making.

The Studebaker-Packard contract with UAW ran out Aug. 31, but was extended for 30 days. Since Sept. 30, the pact has been continued on a day-to-day basis. There's been talk of a strike, but no deadline has been set. Apparently, the union has little inclination for a showdown right now.

• **"Pattern" O.K.'d**—In part, this has been due to union politics. Mostly, though, it has been because the issues in dispute are delicate and technical.

Weeks ago, the corporation gave UAW to understand that it would accept a supplementary unemployment pay plan and other provisions of the auto "pattern" contract.

However, the master contract can't be signed until individual plant agreements are worked out—covering local work terms and conditions. In the case of Packard, this has created no great problems. The stumbling block to a final settlement has been in Studebaker.

• **Past Concessions**—During the years when auto companies could sell every car they could turn out, keeping production lines moving fast was the basic aim in labor negotiations. Studebaker

gave its South Bend (Ind.) Local 5 a batch of costly concessions on wages, work standards, and plantwide seniority.

When auto competition tightened up, and production costs had to be watched more closely, Studebaker (under new management after a merger with Packard) sought relief from concessions that had been made. It asked UAW to give up incentive pay and go back on hourly wages. After once refusing, Local 5 reversed itself last year and agreed. That decision led to a political upheaval in the local (BW—Jul. 16'55, p132) and to strikes this year.

Meanwhile, when contract talks opened this July, management asked UAW to accept further contract changes designed to make Studebaker-Packard more competitive—including occupational seniority instead of the present plantwide seniority.

Since July, negotiations have been pretty much stymied on the seniority issue. Local bargaining committeemen, aware of the repercussions of the earlier wage concessions to Studebaker, have given ground slowly and grudgingly—where they've given ground at all.

• **Sympathy, But**—Reportedly, the international union is sympathetic to the corporation's cost-cutting aims.

However, the Studebaker plant agreement is largely a matter for Local 5 negotiation—and, through the years, the South Bend local has jealously guarded its right to conduct its business as it sees fit. **END**



New John Wanamaker Department Store, Wynnewood, Pa. Architects: Wallace & Warner; consulting engineers: Stewart A. Jellett Company; heating and ventilating contractors: Daniel J. Keating Company—all of Pennsylvania.

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ARBITRATORS Schedler, McCoy, and Alexander begin complex job of deciding . . .

Rules for Firing Strikers

The first eight of 238 Southern Bell cases result in decisions upholding or modifying company discipline—and establish important policy rules for others.

A month ago one of the largest arbitrations in labor relations history got under way in seven Southern states. At stake were the jobs of 238 workers who were discharged during the long, often violent strike by the Communications Workers of America (CIO) against the Southern Bell Telephone & Telegraph Co. earlier in the year.

The job was big and complex. Four of the nation's top arbitrators agreed in advance on some of the "ground rules" for the proceedings, which could easily drag on to the end of the year (BW-Sep.10'55,p170). At the same time they noted that while cases would be decided individually, on the basis of the facts in each, precedents could be expected to develop in the initial decisions.

• **First Rulings**—Last week, three of the four umpires handed down the first decisions, involving eight of the 238 jobs. Arbitrators Whitley P. McCoy, Carl R. Schedler, and Gabriel N. Alexander (picture) upheld four discharges. Exercising their power to modify penalties, they ordered four other workers returned to jobs—one with no penalty, two with the loss of a week's pay, and one guilty of "repeatedly addressing insulting remarks" to nonstriking women employees with a loss of six weeks' pay.

• **Significance**—To management and labor attorneys, the decisions were particularly important as guides to future policy for Southern Bell in three key areas:

• The arbitrators said that they do not look on Southern Bell's discharges of workers for alleged strike misconduct as management unfair-labor-practice

cases; they agreed that "the company is not on trial before us . . . it is the employee whose guilt is in issue." The question in each case thus is whether "the employee's conduct was so bad that it would be unreasonable to require his continued employment."

• In deciding this, they said, the burden of proof will be on the company. Peaceful picketing, efforts at persuasion, and other lawful strike activities protected by federal or state law will not be considered; violence, either to person or property, threats, intimidations, coercion, and the like will be deemed "reasonable cause" for discharge. But "mild misconduct" during a strike will not be considered a bar to reinstatement with or without penalties.

• The fact that a discharged person refuses to take the stand, on advice of counsel, will not be held "by inference" to mean that he is guilty; to sustain charges, the arbitrators said they will require "competent and reliable evidence" of misconduct from the company.

• **Flexible Precedent**—Precedent means less in the field of arbitration than it does in jurisprudence. What is established in the Southern Bell cases need not be followed elsewhere. Despite this, the magnitude of the telephone discharge cases and the stature of the arbitrators involved assures that considerable attention will be paid to the awards and the policy determinations made in the Southern cases. Precedent or not, the findings are likely to be reflected in many future proceedings in the field of discharge cases that are arbitrated. **END**

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In Labor

• • •

USW Demands for Higher Pay For Weekends Get Quick Rebuff

Contract talks in basic steel aren't due until mid-1956, but the United Steelworkers (CIO) is already beginning a public campaign for two major gains next year: a "real" guaranteed annual wage and premium pay for steelworkers who work on Saturday or Sunday.

USW's Pres. David J. McDonald surprised nobody in the industry with the GAW demand, enunciated before (BW—Sep. 3 '55, p. 89). But his emphasis on a Monday-through-Friday work week for steelworkers with "penalty pay" for weekends drew quick retorts.

Industry spokesmen said that a five-day work week in the mills would be "impractical" because steel production is a continuing operation. They said it would be too dangerous to furnaces costing \$5-million or more to cool them off for weekends and then reheat them in time for Monday operations.

• • •

State Invokes Strike Penalty So St. Louis Buses Run Again

A three-day transit strike in St. Louis ended last week when the state of Missouri filed suit against the striking AFL union for \$30,000. That's the penalty the state is claiming under the provisions of a Missouri law that bans public utility strikes.

The union struck against an arbitration board award of 12¢ in raises over a 27-month period. Acting under the King-Thompson Act, the state seized St. Louis Public Service Co. and ordered operations resumed. Twice since 1947, this step had been enough to end walkouts. This time it wasn't.

And, to meet the defiance, the state for the first time invoked the penalty clause in the law—a \$10,000 fine each day of an "illegal" strike during a seizure. Faced with a \$30,000 action for the three-day strike, and the threat of an added \$10,000 for each day the men remained out, the union prevailed on workers to return to jobs.

• • •

Court Again Bars Split Up Of Closed Plant's Pension Fund

Former Michigan employees of Kaiser-Frazer Corp. last week lost another round in their court fight to divide \$6-million accumulated in a pension fund before K-F abandoned operations at Willow Run in 1953. Michigan's Supreme Court upheld a lower court ruling that "the fund should not be diverted from its intended use."

Last year, 1,104 employees sued to force trustees to split up the pension fund after first providing for a continuation of benefits already being paid. The group argued that (1) all K-F employees had an equity in the fund because its cost to the employer—6¢ an hour—was in lieu of a wage boost; but (2) under the K-F pension plan, hardly half of 11,800 former Willow Run workers would ever receive any benefit because they had insufficient years of service when the plant closed.

The petitioners contended that "the fair thing" would be to divide an estimated \$4.3-million not earmarked for continuing present benefits, so that each worker with an equity would get between \$300 and \$400 now instead of "a chance for a small pension" sometime in the future.

First the lower court and now Michigan's Supreme Court have ruled out the cash equity argument. They hold that "the rights of the employees [in the fund] were limited to retirement and disability benefits." And they contend that the fund can be paid out to covered workers only as they reach pension age or are disabled.

The suit attempting to split up the K-F pension fund caused wide concern in management, because it opened up important new questions about the future of the money in funds involved in mergers, relocations, or shutdowns. These fears are now largely abated.

• • •

Firemen Sign New Contract And Rail Strike Threats Ebb

Threats of a strike on the nation's railroads ebbed further this week after the Brotherhood of Locomotive Firemen & Enginemen and 130 carriers settled their long wage dispute (BW—Oct. 8 '55, p. 120).

Brotherhood yard workers on a 40-hour week will get raises ranging from 21½¢ to 33½¢ an hour. Those on road service will get an 8¢ raise, with daily minimum rates of from \$15.73 to \$18.49 for enginemen and from \$13.84 to \$15.58 for firemen.

• • •

Labor Briefs

Perfect Circle Co. reopened its struck New Castle (Ind.) plant this week, with troops on hand to bar any recurrence of violence (BW—Oct. 15 '55, p. 42). Meanwhile, United Auto Workers (CIO) members in auto plants refused to handle Perfect Circle's piston rings in a spreading "unofficial" boycott.

CIO electrical workers struck Westinghouse Electric Corp. plants this week in a contract dispute—the second shutdown for labor-troubled Westinghouse in a month (page 43). The corporation offered 23½¢ in pay hikes over a five-year contract term. The union said it wouldn't sign a contract for that long.

Atomic labor worries eased last week when CIO negotiators agreed to a new three-year contract for 4,500 workers at Oak Ridge, Tenn., and Paducah, Ky. They'll get 24¢ in raises. Meanwhile, the federal Atomic Labor panel took over a deadlocked AFL contract dispute at Oak Ridge.



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THE MARKETS

Wall St. Talks . . .

. . . about short-term rate tops long-term . . . high costs of rumors . . . steel prices may rise . . . new faces.

Prime credit risks this week found short-term borrowing dearer than long-term, just as had been predicted (BW—Oct. 15 '55, p179). Southern Bell Tel. & Tel. was able to sell \$30-million of 40-year 3½% bonds to underwriters at a 100.6511% of par. That's a cost basis of 3.22%, or 28 basis points less than the prime rate of Manhattan banks.

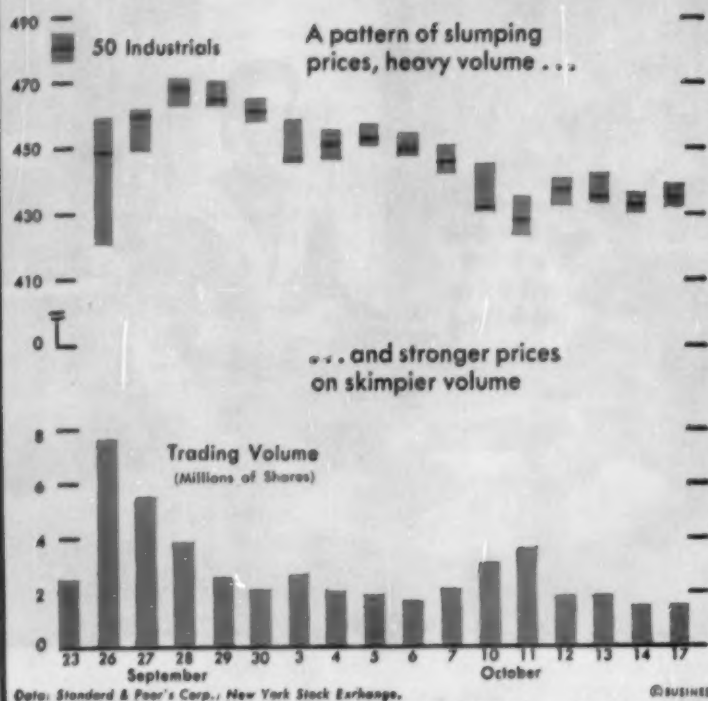
Bettors on rumors have taken a blood bath from one of Wall Street's hottest tips—the one that du Pont common would soon be split. First the talk sent the blue chip stock kiting from around \$200 up to \$249.75 last summer. The failure of the story to come true, plus Pres. Eisenhower's illness, knocked it down to \$195.25 last week. But the rumor is still a potent "rabble rouser," and it got hot on Monday. Result: du Pont opened \$7.50 above the previous close. But the shares then plummeted \$10, and finally closed off \$1.50, after another director's meeting had brought no confirmation of the split.

There's another steel price increase in the offing, according to some smart Streeters. They argue that the industry will soon need more capital for expansion, and will have to pretty up its earnings to attract the new capital. They also say that the steel trade generally believes its profit margins are too low compared with other industries, and that with steel supplies tight this is the time to better its return on its huge investment.

New faces in Wall Street include Leon H. Keyserling, chairman of the Council of Economic Advisers under Pres. Truman, and Robert R. Nathan, labor union economist who was prominent in the New and Fair Deals. Both will join Henry Montor Associates, Inc., a new member of the Big Board. Keyserling will serve as economic adviser, Nathan as investment consultant.

AT&T scored a sellout with its offering of \$637.2-million 12-year 3½% convertible debentures, the largest piece of public financing in corporate history. Mother Bell says that 99.5% of the offering, or \$633.7-million, was taken up by exercise of stockholders' warrants.

The "Heart Attack" Market:



Too Tired to Rouse Up

It was almost as if the stock market was putting on its company manners. For three weeks, the market had sold off heavily on Monday. But last Monday, with a group of Soviet journalists scheduled to visit the New York Stock Exchange the next morning, the market was on its good behavior. It scored a polite, modest rise on the thinnest volume in nearly two months.

• **Pattern**—This recurrent pattern of the last three and a half weeks (chart above) is not an unfamiliar one. During several periods this year, the market for long stretches scored good price gains on shrinking volume, while price slumps went hand in hand with heavy volume.

The fact that the market has, at times during the year, advanced steadily in the face of such a pattern may be somewhat heartening, but bulls would be much happier if volume would expand on these days of slim advances.

Even on the days when the averages gained, the heaviest volume has often come while prices were being cut back from the day's highs.

• **Too Long Expected**—Right now, the

market stands about 10% below its bull market highs, and its inability to generate any volume on rising averages is just one of its worrisome features. The market still has an unhappy facility for disregarding fine over-all earnings, while looking for special windfalls. This was most noticeable early this week when E. I. du Pont de Nemours & Co. announced net earnings up 40% over last year's first nine months. When du Pont didn't follow through with the long-rumored stock split, the stock sold off nearly eight points from its high.

The earnings reports trickling in now are every bit as good as expected. But that's the trouble: The Street has been expecting them for so long. Many Streeters believe that no matter how good reports are, they won't provide much fuel for a new bull market rise. At least, though, they gave promise of some dividend hikes, which, coupled with lowering stock prices, will make yields look a little more attractive.

• **Threats**—Street technicians are also poking at another danger sign in the market. Edmund W. Tabell, of Wal-

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ston & Co., points to this: "The downside penetration of the August lows by both averages now indicates that the major trend, which had been up since October, 1953, is now down." Tabell figures that the dip could well be of the same proportions—about 20% from the bull market peak—as the 1946 slide.

Hanging over the market for the next few months, too, is the threat of widespread tax selling. If prices continue lower, many investors who may wish to take some capital losses to offset gains they have racked up. This teams

up with potential selling by investors who may wish to take what remains of their profits in fast-slumping issues.

• **Rails, Too**—Even the rails, long-time laggards, couldn't come alive in response to good news. The Interstate Commerce Commission ruled that the "temporary" freight rate increases of 1952 would now become permanent instead of expiring at the end of this year. This ruling is figured to be worth \$900-million a year to the railroads, but the rail average could only rouse itself to a token advance.

Paring Bull Market Gains

Stock Group	1954 Close	1955 Range		Recent Lead	1955 Gains	
		High	Low		Maximum	Now
Agricultural machinery.....	180.3	193.8	173.8	176.3	7.5%	- 2.1%
Aircraft manufacturing.....	549.4	629.1	489.2	554.2	14.5	0.9
Air transport.....	443.9	568.9	502.3	522.7	50.7	17.8
Aluminum.....	669.7	1193.4	645.2	1046.8	78.2	56.3
Automobiles.....	338.8	503.9	329.6	466.7	48.7	37.8
Auto parts, accessories.....	231.2	309.1	227.7	246.0	16.4	6.4
Auto trucks.....	163.5	240.8	166.8	217.3	47.3	32.9
Building materials.....	278.7	547.1	276.9	313.5	24.5	12.5
Carpets, rugs.....	119.6	139.1	119.4	126.1	16.3	6.4
Chemicals.....	368.7	494.5	330.0	427.3	34.1	15.9
Cigarette manufacturers.....	83.0	95.1	79.0	91.4	14.6	10.1
Cigar makers.....	163.1	184.9	156.0	184.9	13.4	13.4
Coal—bituminous.....	549.0	680.1	523.3	623.7	23.9	13.6
Confectionery.....	152.5	169.8	146.4	153.8	11.3	0.9
Containers—glass.....	166.3	199.3	164.5	185.0	19.8	11.2
Containers—metal.....	151.1	151.6	133.5	141.0	0.3	- 6.7
Copper.....	241.0	311.1	230.4	260.9	29.1	8.3
Distillers.....	473.5	531.6	434.7	483.5	12.3	2.1
Department stores.....	331.9	394.7	323.4	363.0	18.9	9.4
Drugs—ethical.....	199.3	235.8	188.0	188.0	18.3	- 5.7
Drugs—proprietary, cosmetics....	229.0	261.7	220.7	248.0	14.3	8.3
Electrical equipment.....	333.3	379.3	322.3	322.3	13.8	- 3.3
Fertilizers.....	601.4	585.7	458.7	458.7	- 2.6	-23.7
Finance companies.....	259.8	286.7	252.7	252.7	10.4	- 2.7
\$4, 10¢, 81, chains.....	128.2	131.4	123.0	123.3	2.5	- 3.8
Food companies.....	204.6	216.6	201.1	201.1	5.9	- 1.7
Gold mining (U. S.).....	75.4	75.2	56.5	56.5	- 0.3	-25.1
Lead, zinc.....	107.4	126.1	104.2	111.3	17.4	3.6
Leather.....	168.7	212.9	172.7	192.8	26.2	14.3
Machine tools.....	334.6	365.8	314.2	338.2	9.3	1.1
Machinery.....	232.4	271.6	227.8	248.3	16.9	6.8
Mail order, general chains.....	327.0	452.3	324.4	427.2	38.3	30.6
Metal fabricating.....	314.9	369.1	307.6	325.9	17.2	3.5
Mining, smelting.....	177.3	241.3	175.4	205.5	36.1	15.9
Motion pictures.....	259.0	278.0	242.6	243.1	7.3	- 6.1
Natural gas.....	270.5	304.5	275.1	280.0	12.6	3.5
Office, business equipment.....	470.3	582.3	462.1	519.0	23.8	10.4
Oil—crude producers.....	943.3	945.7	850.2	850.2	0.3	- 9.9
Oil—integrated companies.....	418.7	508.3	409.7	464.1	21.4	10.8
Paper.....	1183.3	1516.6	1130.3	1405.7	28.2	18.8
Printing, publishing.....	174.4	183.4	163.4	167.5	5.2	- 4.0
Radio—TV electronics.....	415.2	515.6	405.3	423.0	24.2	1.9
Railroads.....	229.0	262.5	219.5	236.0	14.6	3.1
Railroad equipment.....	137.4	152.0	133.1	137.6	10.6	0.1
Rayon, acetate yarn.....	365.9	444.9	330.1	410.7	21.6	12.2
Shipbuilding.....	392.0	579.5	389.8	427.4	47.8	9.0
Shipping.....	624.4	693.1	627.8	685.3	11.0	9.8
Shoes.....	142.4	164.6	141.9	158.8	15.6	11.5
Soaps.....	296.2	312.9	278.7	294.9	5.6	- 0.4
Soft drinks.....	115.5	141.1	116.1	127.5	22.2	10.4
Steel.....	351.0	517.9	341.8	465.1	47.5	32.5
Sugar.....	142.4	135.7	170.0	125.9	- 4.7	-11.6
Sulphur.....	438.9	482.4	418.4	443.2	9.9	1.0
Textile weavers.....	279.9	299.4	264.2	271.5	7.0	- 3.0
Tires, rubber goods.....	875.1	1105.3	886.0	1013.6	26.3	15.8
Utility operating companies.....	168.1	188.7	167.8	176.9	12.3	5.2
Utility holding companies.....	285.4	318.7	284.4	298.9	11.7	4.7
Vegetable oil.....	259.8	250.6	222.6	222.6	- 3.5	-14.3

Data: Standard & Poor's Corp. Weekly Stock Price Indexes (1935-39 = 100).

Satisfaction rests on the carton



Many great American companies . . .
among them, Anheuser-Busch, the brewers of Budweiser
. . . have found it good business to include Union among their
major corrugated container sources. Perhaps it would be equally
good business for you. Look into Union facilities
and experience. See how they can increase your
packaging and shipping efficiency.



UNION BAG & PAPER CORPORATION

CORRUGATED CONTAINER DIVISION • Box Plants: Savannah, Ga., Trenton, N. J., Chicago, Ill.

Eastern Division Sales Offices: 1400 E. State St., Trenton 9, N. J. • Southern Division Sales Offices: P.O. Box 570, Savannah, Ga.
Western Division Sales Offices: 4545 West Palmer, Chicago 39, Ill. • Executive Offices: Woolworth Bldg., New York 7, N. Y.

SIX SALES STEPS.



METHODS CHART for Increasing sales power

APPLY BUSINESS PAPER ADVERTISING HERE

Sound and consistent product advertising is the best, quickest and cheapest way to accomplish the preliminary steps in building an order.

FOR GREATER SALES PRODUCTION HERE


KEEP CUSTOMERS SOLD



With Advertising (Mechanized Selling) functioning properly on Steps 1, 2, 3 the salesman can concentrate more of his valuable selling time on the important job of producing finished orders.

...apply advertising to help the salesman hold the line against competition—lay the foundation for future sales.

. and the Hurdles to a Sale



The man who signs the order for a product that sells to business and industry is seldom the sole buying authority. Back of him are the key men in design . . . engineering . . . production . . . maintenance. These men, who may be hidden behind doors or titles, must be contacted and sold before the order is signed.

Given enough time, your salesmen can clear these sales hurdles and win the order. But it is costly to have salesmen spending their limited selling time on the preliminary steps to a sale.

The best way of reaching both known and unknown buying influences is through the magazines these men must read to keep up with their jobs. Business magazines get past closed doors. They deliver your sales message to thousands of customers and prospects *at the same time* . . . at a cost which can be counted in pennies per call.

In other words, business magazine advertising is to selling what good machines are to production. It multiplies individual effort. That's why we call it "Mechanized Selling." It mechanizes the preliminary steps to a sale and enables your salesmen to spend their valuable working time discussing specific product applications and closing sales.

"Orders and How They Grow," a 20-page McGraw-Hill booklet, takes a realistic look at just what advertising does—and can do—for the men who sell. Your McGraw-Hill man will be glad to provide you with a copy.

McGRAW-HILL

PUBLISHING COMPANY, INCORPORATED

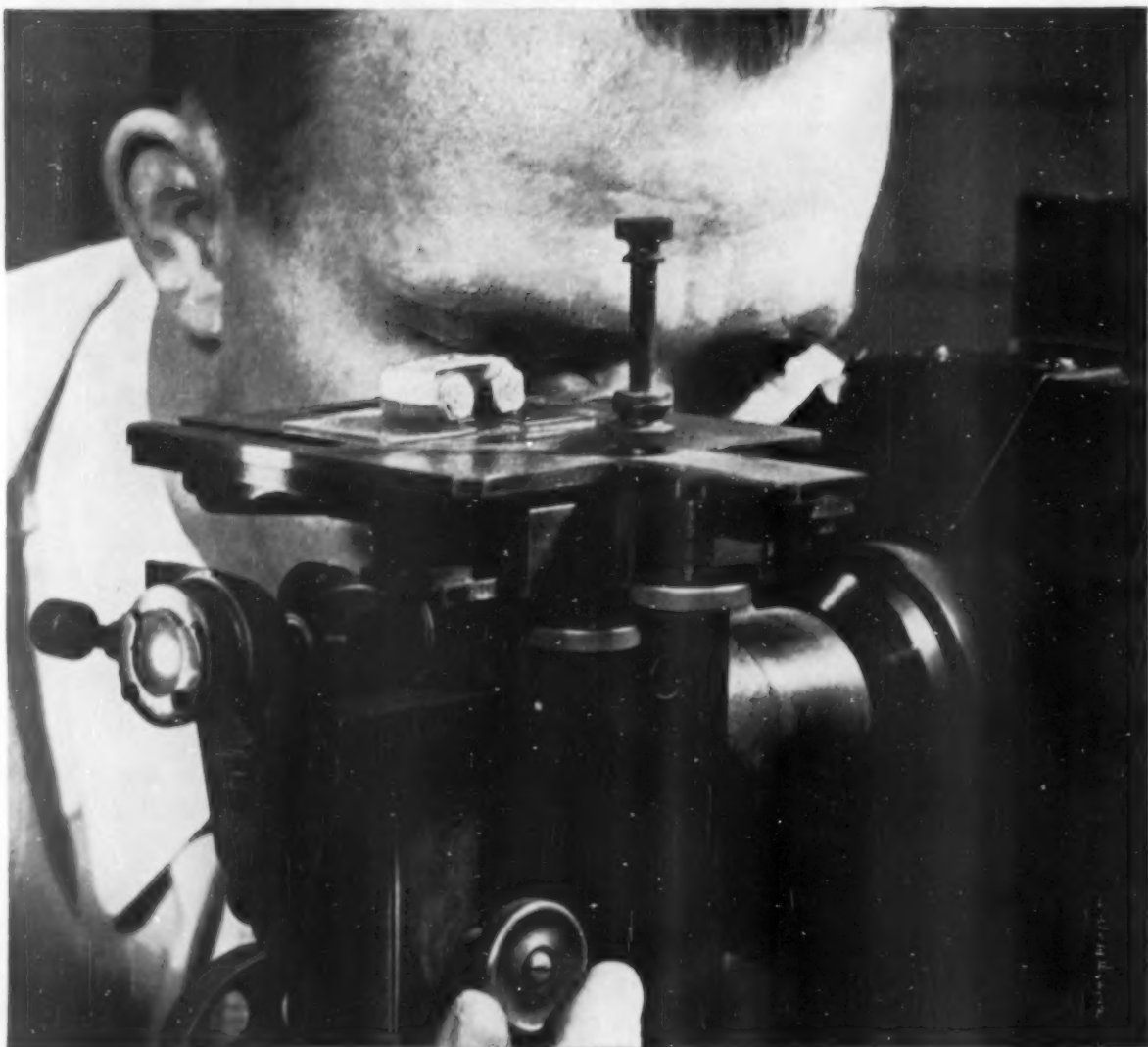


330 WEST 42nd STREET, NEW YORK 36, N. Y.



OVER A MILLION MEN IN BUSINESS AND INDUSTRY PAY TO READ MCGRAW-HILL BUSINESS PUBLICATIONS

Why Granite City Steel is growing 3 times faster than the industry!



Licking sheet steel problems for 77 years

Somewhere along the line, a steelmaker must make the same decision a doctor must make. Specialist or general practitioner? Granite City Steel decided 77 years ago to concentrate its time, skill and equipment into just one product—the best flat-rolled steel on the market.

This specialization has produced many benefits for Granite City Steel customers. Sheet steel buyers in Middle America have consistently found the *right* answer to their problems here—quicker and less expensively than they could at more diversified mills. Your sheet steel order never competes with other products at Granite City Steel. It gets the undivided attention of experts. Sales offices in St. Louis, Kansas City, Minneapolis, Memphis, Dallas, Houston, Tulsa.



PERSONAL BUSINESS

BUSINESS WEEK

OCT. 22, 1955

A BUSINESS WEEK

SERVICE

It will be a lot easier—and less expensive—for you to give securities to children in the future than it has been in the past. A new idea sponsored by the New York Stock Exchange and the Assn. of Stock Exchange Firms is the basis for the development.

The plan is simple enough: Through changes in state law, adults who give securities to minors can either keep the power of management (freedom to sell and reinvest as they would with their own securities), or give that power to an adult member of the child's family.

That's a big change. Managing securities that belong to minor children has always been a complicated legal process. The only way has been to set up either a guardianship or a trust, both of which are costly and well-tangled in red tape.

Moreover, under that system, if the guardian or trust wants to sell any common stocks owned by the child, reinvestment is limited in most states to "legal" securities—meaning that common stocks are excluded. And the securities can be sold by the guardian or trust only with court permission.

One big catch with the new plan at the moment is that it has become law in only eight states—California, Colorado, Connecticut, Georgia, New Jersey, North Carolina, Ohio, and Wisconsin. But it's scheduled to come before the legislatures of 10 other states when they convene in January.

Stock-market experts are confident that eventually the plan will become law in all states. There are two main reasons. First, it does not replace or infringe on the old law at all. Second, its very simplicity makes it an attractive addition to investment law.

Anybody can give securities to children. Under the new law, the donor simply registers the securities in the custodian's name. If he wishes, the donor can remain as custodian of the investment; he doesn't have to set up a guardianship or trust. If the donor doesn't want to be custodian, he must appoint an adult member of the child's family to do the job.

A gift of securities to a child is irrevocable; it is completely his property, even as a minor. However, there is this big difference under the new law: The custodian can manage the child's securities as he would his own.

That means he can sell and reinvest—but only, as the statutes all specify, "in such securities as would be acquired by prudent men of discretion and intelligence who are seeking a reasonable income and the preservation of their capital." If a custodian fails to follow this provision, the child can take him to court when he takes over the investment at the age of 21.

Likewise, the custodian can either accumulate or reinvest dividends, whichever he thinks is to the greatest advantage. But in either case, all income must be earmarked as the child's property.

If dividends are accumulated, they must be earmarked in a separate bank account as the property of the child. The custodian can remove these funds (and even use principal) for the direct benefit of the child—such as his education—even if other funds are available for the purpose.

The custodian is liable to the child only for losses occurring through bad faith, intentional wrong-doing, or for not reinvesting proceeds of sales as would a "prudent man." When the property is turned over to the child at the age of 21, no accounting is required unless the child requests it.

PERSONAL BUSINESS (Continued)

BUSINESS WEEK

OCT. 22, 1955

The new law has not been in effect in any state for more than six months. As a result, a lot of questions are still unanswered because they are untested.

One, for example, is the law's tax aspects; the Treasury hasn't ruled on it yet.

Another is jurisdiction—whether a donor living in a state that has no such law can give securities to a child living in a state that does. All indications are that he can, but there's no test case as yet.

Note that this law is designed for the accumulation of capital for a minor over a period of years. If large lump sums of money are involved, it is still best to set up a trust or guardianship.

—•—

How you winterize a swimming pool in freezing climates depends largely on its construction. Experts offer these general rules, but suggest that you consult the builder for details on your specific pool:

In most cases, the only pool which it is safe to drain is that made of reinforced poured concrete—if it has proper under-drainage. Even then, most experts urge that you place a foot of salt hay over the bottom to make certain frosts won't penetrate the floor slab.

Gunite pools are generally built to be kept full in winter; the construction is lighter and they are usually not underdrained. It's a good practice to lash logs or timbers around the edge of either gunite or poured-concrete pools that are kept filled. The wood helps take up the ice pressure.

On steel pools, follow the advice of the builder as to whether they should be drained or left filled.

Whether the pool is full or empty, all piping subject to freezing should be drained, and pumps and chemical feeding equipment removed if it is located in a damp and unheated place.

If convenient, remove springboard, ladders, and underwater lighting. Store in a dry place out of the weather.

—•—

Tests by du Pont indicate that "boil-away" methanol antifreeze (alcohol, or "nonpermanent" type) will last all winter in modern automobile radiators driven in relatively mild climates. The reason is the pressure cap that now seals cooling systems raises the boiling point about 17½ deg.

However, methanol is likely to boil off if used in high altitudes (where liquids boil at lower temperatures), or when the temperature drops below 30 deg. below zero (because such temperatures lower the boiling point of the coolant.) Ethylene glycol (permanent) antifreeze is still needed.

—•—

Note for fishermen: A new monthly magazine, *Fishing Waters of the World*, brings out its first issue this month. Allsport Publishing Corp., Americas Bldg., Rockefeller Center, New York 20. Subscription: \$3.

—•—

Manners and modes: You can now get custom-made cuff links that duplicate your business card, signature, or company trade mark. . . . Major credit-card holders can charge their admission to all Cinerama theaters. . . . If one men's clothing manufacturer has his way, the man in the gray flannel suit will soon be switching—more appropriately—to a color called "currency green."

Meat keeps fresh in **PLASTIC "SKIN"**



protected by

Swift & Co.
"Saniseal" wrapper is
made of "Lamitex"
produced by
Plastic Film Corp.,
New York 17, N. Y.

Ever tackle a food package this big and awkward? Refrigeration alone isn't enough. When meat loses its natural moisture, it loses color and freshness. Even a whole carcass shrinks in storage and transportation.

That's the reason for this new wrapping—cotton fabric covered with a coating based on **BAKELITE** Brand Vinyl Resins. Moisture stays in, meat stays fresh. Since beef, veal, and lamb lose moisture at different rates, the wrappers

for each have different porosities. These wrappers are easily put on with a special sewing tool. One replaces two formerly needed when conventional materials were used. They can be printed with attractive designs and trade-marks.

Big or small — your packaging may get similar benefits from a coating based on **BAKELITE** Vinyl Resins. Paper, metal, foil, or cloth can be improved. Write Dept. BW-14.

Vinyl, Polyethylene, Polystyrene, Phenolic and Epoxy Resins for Packaging



BAKELITE COMPANY, A Division of Union Carbide and Carbon Corporation **UCC** 30 East 42nd Street, New York 17, N. Y.
The term **BAKELITE** and the Trefoil Symbol are registered trade-marks of **UCC**



SHORT COURSE FOR EXECUTIVES, like the one at Columbia University above, have become commonplace on college campuses in the last few years. Now one of these executives unfolds his . . .

Confessions of a Trainee

Two weeks and a couple of days ago Student X returned to his office from a six-weeks' management training course.

He was one of 56 men who attended the seventh session of Columbia University's Executive Program in Business Administration (picture).

By the end of this year something like 2,500 executives will have scrolls similar to Student X's, testifying that they participated in one of a score or more management courses at universities.

They are men ranging in age from

30 to their mid-50s. The schools are scattered from Boston to Palo Alto, from Georgia to Texas. Each year new ones are added as universities and colleges—their administrators' ears always cocked to industry's needs—find unprecedented demand for such courses. In 1954 alone, at least seven new management training classes got under way.

I. Why?

Today such programs range in length from Harvard Business School's two

executive courses (one 13 weeks long, the other 16 months) to the University of Pennsylvania's two-week seminar for junior executives.

This growth is understandable when you consider the country's long-standing industrial boom, almost unabated since 1940. It has placed heavy emphasis on the need for managers who, in a less hectic period of expansion, might have had the chance to develop slowly within their normal business careers.

Take General Electric Co. Not only does it send executives to university

Thrown

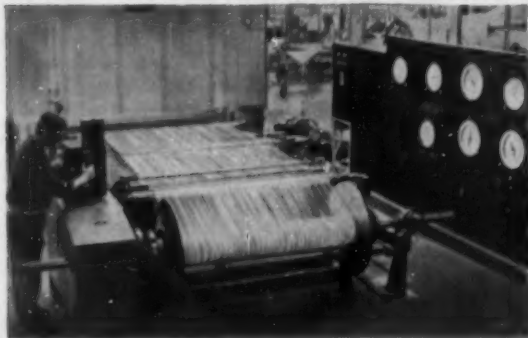
for a production loss?

**Instrumentation can help you
hold the line . . . gain ground, too . . .**

Modern methods of measurement and control are one sure way to guard your production line. The right kind of automatic controls regulating production processes can boost your plant's output . . . increase product quality . . . even decrease unit costs. Instrumentation can free valuable manpower for other production jobs, as well as provide accurate data for your cost accountants. What's more, engineered use of instrumentation can decrease your investment in new facilities, or guard your present plant investment.

For the most complete line of controls in the industry . . . for prompt service from more than 100 offices across the nation, see Honeywell. Your nearby Honeywell sales engineer will be glad to show you what modern instrumentation can do for production.

MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, Wayne and Windrim Avenues, Philadelphia 44, Pa.

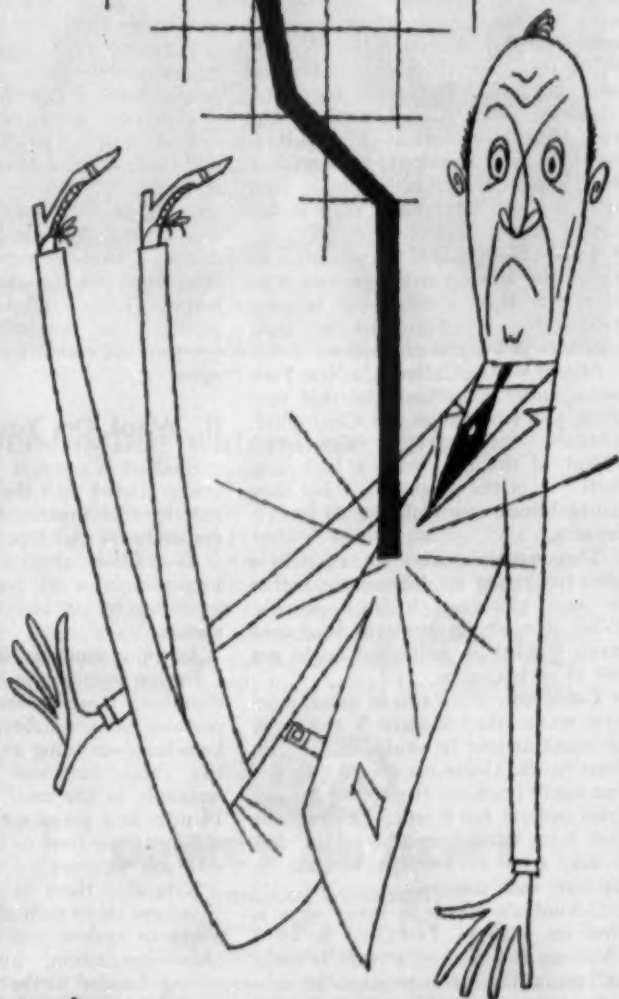


Instrumentation upped production 25% at Canadian Celanese, Ltd., Sorel, Quebec. Carefully planned utilization of Honeywell automatic control in slashing Celanese acetate yarn leaves no variable to chance. Sizing and drying temperatures are accurately recorded and controlled. Other Honeywell instruments keep records of yarn stretch, moisture content, and slasher speed.



MINNEAPOLIS
Honeywell
BROWN INSTRUMENTS

First in Controls



Write for a copy of Honeywell's Automation Dictionary

courses, but shortly it will open its own fully staffed management school in Westchester County outside New York City. GE figures it will need a couple of hundred men undergoing training each year just to meet the expected demand from (1) normal attrition and (2) expansion. University programs still don't provide enough facilities for that sort of requirement, GE feels.

• **The Merits**—To a company president faced with the problem of developing men who can manage, all of this raises some questions:

What do these courses teach, especially those designed for upper-level executives 37 to 50 years old? How good are the schools generally? Do student executives in, say, six weeks gain anything tangible? Can you justify sending five or six men a year at a total cost of as much as \$20,000? Are such schools a must—or a fad?

So far, there have been only a few attempts to evaluate the university executive course. Their existence has been far too short to depend on experience as a test. Harvard's Advanced Management Program, granddaddy of them all, dates back only to mid-World War II. What evaluation there is generally has been favorable. But some dissenting voices are raised. Col. Lyndall F. Urwick, British consultant who participated in an American Management Assn. survey, has tabbed them as "too little and too late" for a man in his forties.

• **To the Source**—One obvious place to go for the answers is to the men who have won their management training scrolls. But to researchers that have tried it, this has proved fruitless.

Allison V. MacCullough, a New York management consultant, did that very thing and reported in the *Controllers' Institute* magazine, *The Controller*: "Most of the men have a high estimate . . . of the program . . . but they remain almost inarticulate as to specific benefits."

This inarticulateness doesn't help a company trying to determine whether to send executives to such schools. What it wants to know in hard cold terms is what an individual might get out of such courses.

• **Guidepost**—With this in mind, *BUSINESS WEEK* asked Student X this week to report as best he could on his reactions to the Columbia course. This is one man's reaction. It gives no cut and dried answers, but it reflects a viewpoint that many others probably share, and it may serve as a rough measure in assessing such courses.

Columbia's course in many ways is ideal for analysis. Launched in 1952 (there are two sessions a year), it ranks well up on the list in prestige. Its subject matter is considered fairly typical and its teaching methods run the gamut



STUDENTS enjoy bull sessions.

—from Harvard's well-known case study method, through formal faculty lectures, small group sessions, special seminars, and guest speakers.

• **Setting**—The campus is Arden House at Harriman, N. Y. Classrooms and living accommodations were once the palatial home of Gov. Averell Harriman, who donated it to Columbia.

Student X's class consisted of men well distributed in terms of both geography and industry—manufacturing, finance, utility, transportation, communication. All but five had college degrees. Their average age was 44.8 years; their average salary \$20,700 with bonus. Titles included a divisional president, an executive vice-president, company accountants, department managers.

II. What Do You Learn?

Student X's report on his six-week course started with the usual banalities that have become associated with any evaluation of this type:

" . . . Plenty of good contacts . . . it helped broaden my point of view . . . a chance to get away from the daily routine. . . ."

Anything more specific?

In his opinion, probably the most disturbing thing he learned is the importance of personality—not necessarily knowledge—in being an effective executive. This fact was brought home especially in the small group sessions, 14 men to a group with each member serving at one time or another as chairman and secretary.

Naturally, there is an unavoidable phoniness about such sessions in any attempt to analyze one of the business cases—organization, human relations, pricing—handed to the members. Even so, Student X watched each of the three groups of which he was a member

develop leaders—and it was rarely the person who had the most information at hand about any particular problem.

What is discouraging, of course, is the realization that this knack for leadership can be observed and the techniques seen at work but it can't be learned in a six-week management course.

Anything else?

It is now a question in his mind whether management—call it art or science—can be taught. There are no theorems to tuck away in your head to be drawn on when needed.

Literature on the subject—shelves full—is crammed with copybook rules, obvious reminders of the obvious.

Student X insisted that this is no criticism of the Arden House course or any of the other courses that have sprung up. On the contrary, he figures it was worth his while to find out one other important thing:

You only learn to manage through practice—and if that is a copybook rule it is a good one to keep in mind. For companies, the implication is apparent. They can send every one of their executives or future executives to school and still not develop managers if their organizations discourage initiative.

Then there was something on how you organize to encourage such initiative?

Student X thought so, but it was a little frustrating to find so many different opinions even on such a specific subject as organization. On the one hand, a lecturer deplored the use of coordinators, committees, and assistants, proclaiming that such titles simply were an admission of bad organization. On the other hand, quite a few members (especially the oil executives) and other speakers defended the practice. They had their company records of expansion and high profits to back them up.

It was agreed, though, that decentralization of authority is here to stay, but little agreement on how you accomplish it. There's no pat method.

What else?

You learned that profit isn't everything. That may sound ridiculous and perhaps, as management consultant Peter F. Drucker suggested, management serves everyone best if it keeps its eye firmly fixed on its primary business. But in most of the discussions, students and faculty alike assumed that profits are only one objective that the executive must keep in sight. It was suggested, for instance, that management today whether it knows it or not has to find and express a philosophy that will explain and justify to the country as a whole—and to the managers themselves—the power it exercises. World War II, with its unanimity of purpose provided a new motive after the depressing 1930s, not only for management but for those it manages. That was lost after the war

DEWEY and ALMY . . . products keyed to basic human needs



Here's the secret of *longer-lasting* water-base paints

Just about everybody who has used water-base exterior masonry paints or interior primer-sealers will tell you "they're *really* easy to apply."

They can be brushed or rolled over still-fresh plaster, eliminating the need for long waiting periods while the plaster ages. Outside, they can be applied successfully at temperatures as low as 40°F. Indoors or out, they dry in about an hour. There's no unpleasant odor. Brushes or rollers can be cleaned easily in water.

Many manufacturers found that these advantages of water-base paints were realized to the fullest extent when the paints were made from polyvinyl acetate resins. But when such paints aged, they had a tendency to become brittle . . . until Dewey and Almy developed a special type of vinyl acetate copolymer emulsion called EVERFLEX.

Paints made with EVERFLEX stay flexible because the plasticizer that keeps them that way is an integral part of the emulsion. Chemically locked-in-place, the plasticizer

will not work its way out of the paint film, as it did in earlier versions of polyvinyl acetate paints. You get a paint that has all the advantages of easy application *plus* the weathering qualities that are needed for long life.

Dewey and Almy's knowledge of the chemistry of small particle dispersions has solved other problems in many industries. Perhaps you have a problem that one of our products, listed below, could solve. Investigate today!



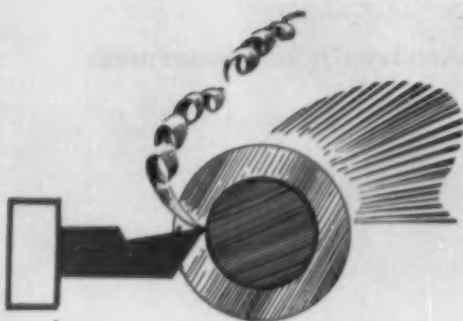
DEWEY and ALMY

Chemical Company

DIVISION OF W. R. GRACE & CO.

Cambridge 40, Massachusetts

Sealing Compounds for Food Cans • CRYOVAC Bags for Food Packaging • Organic Chemicals • Battery Separators • Flowed-in Gaskets • Shoe Materials
Meteorological Balloons • Chemical Products for the Construction Industry • Resin Adhesives • Soda Lime • Print Blankets and other specialized Belting
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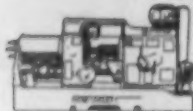


OUR JOB:

to provide the

Right Machine

for YOUR JOB



BAR AUTOMATICS
4 Spindle — 7 sizes, 1 to 7 1/2"
6 Spindle — 9 sizes, 1/2 to 6"
8 Spindle — 6 sizes, 1/2 to 6"



CHUCKING AUTOMATICS
4 Spindle — 2 sizes, 10 and 12"
6 Spindle — 4 sizes, 2 1/2 to 12"
8 Spindle — 2 sizes, 6 and 8"



TURRET LATHES
(Bar-Type — Fully Automatic)
Single Spindle — 3 sizes, 2 1/2 to 21 1/2"



TURRET LATHES
(Chuck-Type — Fully Automatic)
Single Spindle — to 12" cap.



CHUCKING AUTOMATICS
Single Spindle ("Chuckomatic")
To 12" capacity

Management decisions regarding the purchase of new equipment are, and rightly so, reflecting an awareness of the fact that there are many areas of operation—other than actual machine design—which affect machining costs.

Machine performance, for instance, is being studied more closely in line with *the job to be done*. The buyer is becoming increasingly more conscious of the need for sales, service and engineering help—when he needs it. He is taking a closer look at the machine he is considering, in relation to the advantages of "operator familiarity"—will there be plenty of experienced help available.

Analyzing his problem and evaluating these important considerations, he usually finds more of the right answers at National Acme.

National Acme's experience in the design and manufacture of nearly 50,000 multiple-spindle bar and chucking automatics and fully automatic turret lathes provides a background of experience and versatility not to be found in less comprehensive lines of machines. This combination of the *RIGHT* machine backed up by experienced and responsible engineering assistance is hard to beat.

May we talk it over with you?

**THE NATIONAL
ACME COMPANY**

191 East 131st Street, Cleveland 8, Ohio

—and management now finds its hardest job is to motivate the managed.

This, of course, explains what has become almost a fetish among businessmen—human relations. But you can't shrug it off as a passing fad, because it is an indication, however fumbling, that management is seeking answers to its philosophical dilemma.

Was there anything about how to run a business?

The best way to answer that, according to Student X, is from the negative side. He returned to his office wanting to know a lot more about three specific areas:

- Modern accounting and the controls that are available to understand an operation quickly. In one case study—a problem involving pricing and allocation of costs—four groups came up with four different answers.

- Internal financial management. This turned out to be so popular a subject that the class voted overwhelmingly to have two special night seminars on that subject. And for most, that taste merely whetted their appetites.

- Economics. There are many unfamiliar terms being bruited about—consumption economy, forced savings, built-in inflation, compensatory fiscal policy, national economic accounts such as gross national product and national income. A businessman probably doesn't have to know all about these to be successful, but it is upsetting to find his business helps make up statistics he doesn't fully understand.

What about the national economy?

Student X wasn't quite sure whether he was typical or not among the class (he admits having voted for Roosevelt twice), but he was interested to find (1) a determination never to allow another Great Depression merely to adhere to a political philosophy of government non-intervention; (2) recognition that deficit spending is desirable when it is necessary to bolster the national income; (3) an acceptance of full employment as probably the paramount goal of business; and (4) an admission (although somewhat reluctantly among some of the class) that the U.S. should take the lead in reducing international trade barriers.

One man, according to Student X, summed it up this way: "I feel like a New Deal Republican."

How did Student X feel?

He learned a few personal things:

- Keep your mouth shut more often than open.

- Don't use phrases in conversations such as: it is obvious; it's clear; everyone knows; the facts show.

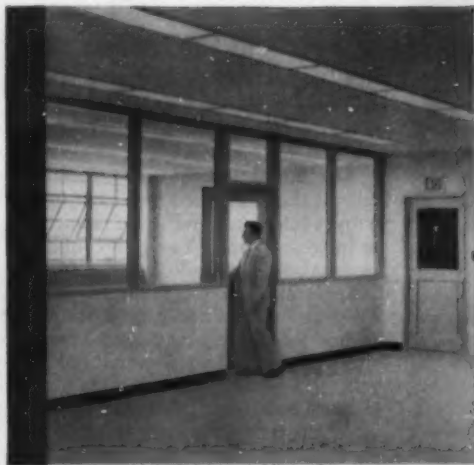
- Winning arguments may be intellectually satisfying, but that's about all.

- Poker is a fine way to judge people. **END**



Equipped throughout with Ceco Hollow-Metal Doors, Frames, Hardware and Office Partitions is the Burlington Freight Terminal in Chicago, Illinois. Windows are Ceco-Sterling Aluminum Projected types. Architects and Engineers: Shaw, Metz & Dolio. Contractor: E. H. Marhofer.

How to get Door-to-Door savings when you build



High-quality, machine-produced Ceco Hollow-Metal Doors, Frames, Hardware and Partitions brought three-way savings in Burlington Route Freight Terminal, Chicago, Ill. Handsome Ceco-Sterling Aluminum Projected Windows cut cost because they need no painting.

Cut costs 50% with Ceco's Door-Frame-Hardware-Partition package

When you visualize your new building . . . STOP . . . picture each door opening in your mind's eye. And right then, consider how you can realize a 50% saving, because you can. Ceco offers you new three-way savings on doors and partitions . . . with low product cost, low installation cost and low maintenance cost. Yet with all these savings you get high quality. Here's the way it works: The original cost of a Ceco Door-Frame-Hardware unit in a 38"x84" opening is \$90.00 compared to \$180.00 for a custom-made metal or wood door. Installation takes minutes instead of hours, since Ceco Doors and Frames are factory-mortised for attaching hardware. Maintenance cost is low because Ceco Doors and Frames are bonderized for paint adherence. That means long-lasting finish. Made of steel, they will outlast any building. Result: A better door—silent, strong, safe, non-combustible. Office partition frames, ready for easy erection and glazing, are made to match the door frames. When you build, see Ceco for savings. Consult your local telephone directory for nearest office and phone number.

CECO STEEL PRODUCTS CORPORATION

Offices, warehouses and fabricating plants in principal cities
General Offices: 5601 West 26th Street, Chicago 50, Illinois
Metal Windows, Doors / W/C Deck Floors / Steel Joists / Metal Roofing / Lathing Products

In construction products Ceco Engineering makes the big difference



Bethlehem Pacific Coast Steel Corp. was pleased when Jim Humphrey (right), one of its employees, was tapped by Seattle Community Chest to help organize its annual drive. Like many other employers, Bethlehem realizes that fund-raising campaigns can provide a . . .



Fast Training Course For Junior Executives

Many companies are waking up to the fact that they can get more than goodwill by releasing personnel to work on community fund-raising campaigns. These drives often provide an ambitious young executive with a valuable training ground, and give him a chance to develop contacts and skills that usually take him years to build up in his regular job.

That's why Bethlehem Pacific Coast Steel Corp. was delighted when the Seattle United Good Neighbor (Community Chest) fund tapped Jim Humphrey—one of the company's engineers—to help put its "cause" over the top (pictures).

• How It Works—While more and more charity-minded communities are cashing in on management's new conception, Seattle claims that it has developed its loaned-executive program further than any other spot in the country.

George M. Dean, vice-president and general manager of Pacific Telephone & Telegraph Co., heads up the recruiting end of the 12-week drive. Every year, starting as early as May, he asks management to free junior executives—men usually between 30 and 35—for service with UGN. Dean uses the executive training angle as one of his principal wedges to dislodge these men temporarily from their desks. As proof that

it works, he points out that when the loan program began in 1952, it pulled in only 10 men. This year's drive drew 48 men from 30 companies.

• Full-Scale Job—The young men who get tapped for these extracurricular jobs find that the work involves a lot more than passing the hat. For the most part, they're enthusiastic about the program. Working with other "loanees" and with employees of other companies gives them a broader idea of company organization. It also gives them a chance to test their mettle.

According to Humphrey, the three toughest parts of these jobs are also the most valuable, so far as his personal training is concerned:

Meeting top executives. "When you talk to the head man you have to talk with confidence and have something of interest to him. You gain confidence in speaking to people."

Speaking before groups. Since all speeches are extemporaneous, "it demands thinking on your feet."

Scheduling. "Unless everything dovetails, it holds up the drive."

On a workaday level, the men pick up a lot of ideas that can be taken back to the home base. One junior executive returned from his stint with the UGN drive with a method to control absenteeism, a new safety measure, and a plant welfare plan.

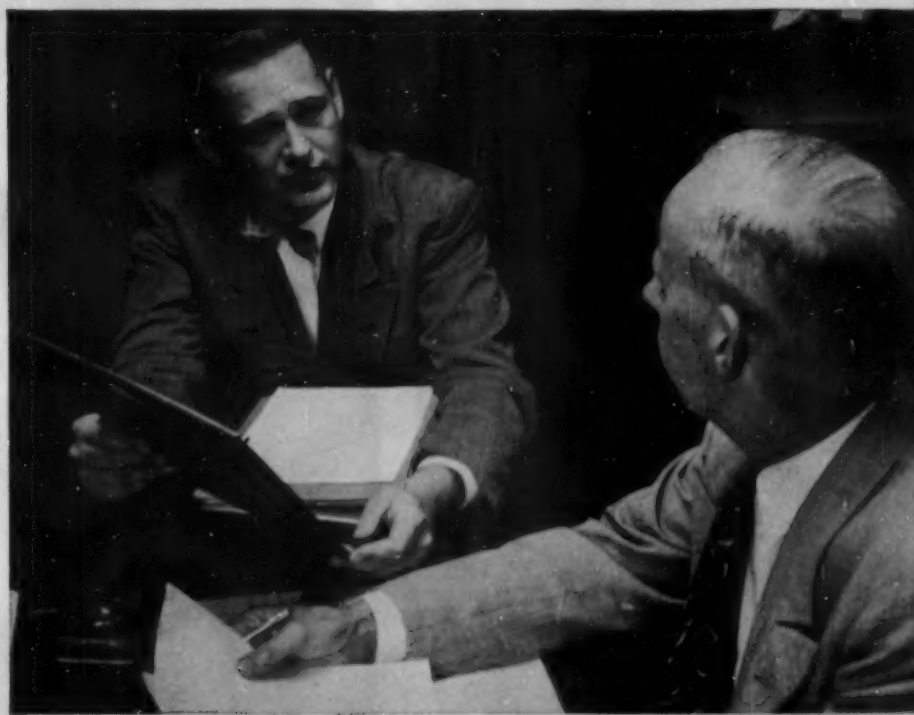


PAMPHLETS arrive at plant where Humphrey will rally employees to the cause.

Contacting potential sponsors is one of first jobs. At fund headquarters, Humphrey (right) and other loaned executives get busy on the phone. Humphrey has 58 companies on his list.



Conferences with top men such as Ernest Hinton (right), president of Olympic Steel Works, give Humphrey a self-confidence that it might have taken him years to develop on his regular job.



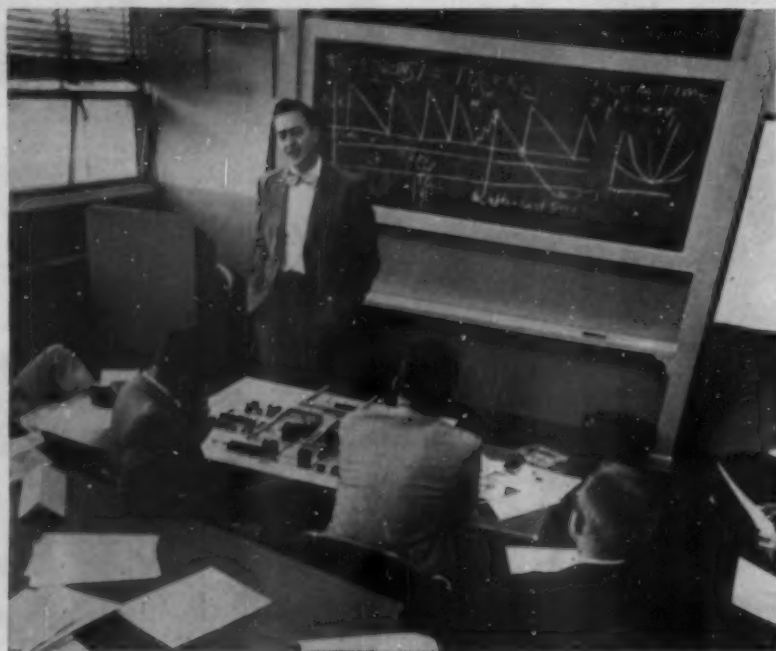
Speaking before groups is a new and tough experience for most of the young executives. But Humphrey's employer is pleased when Humphrey returns to his home base a veteran public speaker.



END



Operations Research



IN CLASSROOM, James Thompson, chief industrial engineer, tells how Operations Research was used to get facts about a plant installation, builds model to test it.



IN SHOP, Thompson and delegates examine the model to compare details of its planning with the finished installation actually in operation.

Puts on a Life-Size Show



IN CLASSROOM, James Sieloff, Argus production planner, explains math that went into machine workloads chart.

Argus Cameras, Inc., opened its plants in Detroit last week to the Systems & Procedures Assn. convention, to show delegates how Operations Research works in an actual plant situation. Two of the problems Argus used to demonstrate the technique are shown here.

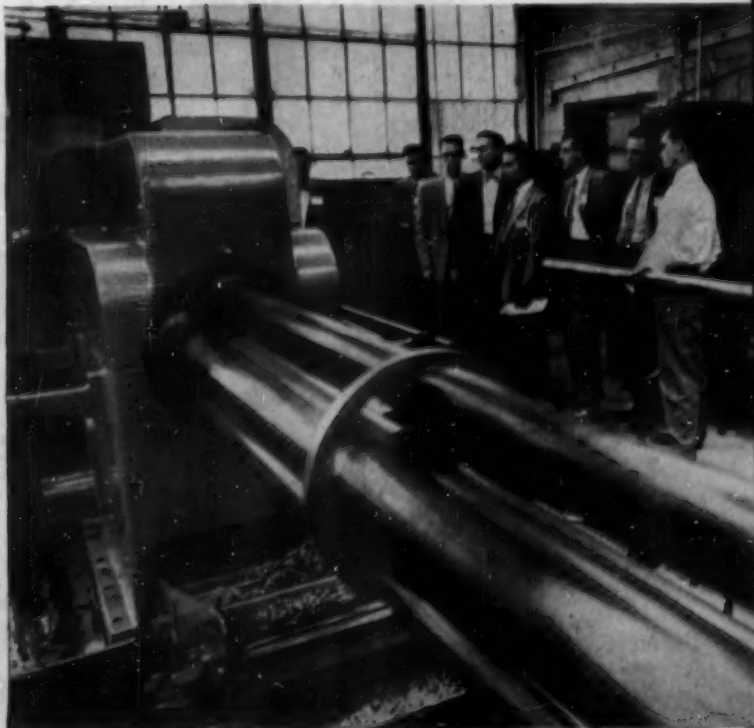
"There has been more foolishness about Operations Research written in the past three years than about golf and women."

That's what Robert Ferguson of Methods Engineering Council—a consulting company—told the Systems & Procedures Assn. at its annual meeting in Detroit last week. Coming from a practitioner of the art, this was a refreshing point of view.

Operations Research—one of the newest tools in the management consultant's bag of tricks—can be a forbidding idea to the layman, and to a good-sized



IN SHOP, Sieloff shows how he can get an instant fix on the availability of the machines for new work. Visitors see for them-



selves how the planning control board establishes workloads, and how the machines meet the schedule.

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ARGUS CAMERA PLANT played guinea pig to Systems & Procedures Assn. convention, to demonstrate Operations Research in action.

segment of management as well, trying to see through all that has been written on the subject (BW—Aug. 27 '55, p64).

It was to shorten that shadow that the Systems & Procedures Assn. got a chance to see how glamorous and promising the new techniques of Operations Research are when applied in a particular company. SPA is a group of business systems administrators and engineers whose chief interest is in office efficiency. Delegates spent two days at Argus Cameras, Inc. (pictures), where OR is accepted enthusiastically as a useful management tool.

• **Assets**—As a preliminary, Ferguson gave the systems people his ideas of what OR is, and what its advantages are. According to him:

• The chief characteristics are the use of a team of researchers and the wider application of the scientific approach, especially the use of mathematical models.

• Such an OR team studies a problem from the standpoint of causes. Ordinarily, an executive is more occupied with the effects of the problem in terms of dollars and cents.

• Time is on the side of the OR team—time that executives rarely can spare to plumb the depths of a problem.

• You can divide OR into two parts: pure OR and applied OR. The first is largely theoretical and mathematical, often not concerned with providing specific answers to specific problems. Out of this, it is hoped, will come basic principles applicable to business.

• **Setup at Argus**—It was applied OR, however, that the delegates went to see at Argus.

Argus, with about 1,000 employees, does a \$21-million-a-year camera business. It is a young company both in length of operation—the first Argus camera was introduced in 1936—and in the age of its management (average age is 36).

But Argus admits that up until last year many of its methods and procedures were pretty old-fashioned.

About a year and a half ago, Argus' chief industrial engineer, James W. Thompson, developed an interest in Operations Research. Last year, the company called in the services of Methods Engineering Council, where Thompson formerly worked. MEC first made an over-all survey of Argus' operations and made some tentative suggestions. Then it came in and showed Argus' management how to work out the concrete solutions using OR concepts.

• **Solutions**—Last week, the Systems & Procedures delegates saw some of the improvements that can be traced directly to Argus' application of OR concepts. One of the most outstanding improvements shows up in the scheduling of machines.

Argus has 16 screw machines in its shop. Under the old system, the production department sent orders to the shop as they came in. When anyone wanted to know how many of the machines were idle, he had to go count them. Production scheduling was strictly seat-of-the-pants.

Today, the production planning department has a chart that tells at a glance what the workload on the various machines is at any moment, and even in the future. The chart also indicates the most efficient use of all 16 machines for maximum profit advantage. What's more, the production planners can tell far enough ahead when production schedules will be low, so they can call in work being done by their suppliers.

Then there was Argus' purchasing problem. Management had no exact method for calculating unit costs—to help determine whether to make a part itself or buy it from outside. With Methods Engineering Council help, the company now has a make-or-purchase comparison form that can be used for any of its more than 1,000 parts. In a matter of minutes, Argus can figure an economic lot quantity, and establish an ideal cost for each part. The purchasing department can compare this cost with outside bids to determine whether it will be more profitable to buy or make the part.

Inventory was another problem at Argus. The consultants trained Argus on how to control inventories by using mathematics. Now, the company is working on the use of statistical methods for taking inventory. **END**



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MANAGEMENT BRIEFS

American Airlines will put 220 executives through a Cornell University management training course this fall. They'll take the three-week course in groups of 20 through the academic year. Their assignment: to adjust to the airline's decentralization program and get ready for the growth and change expected in the transport field.

Textron American, Inc., has added three more non-textile companies to its string (BW-Dec. 4 '54, p84). It bought Camcar Screw & Mfg. Corp. of Rockford, Ill., producer of metal fasteners for aircraft, auto, and appliance markets; Kordite Corp. of Macedon, N. Y., maker of plastic products, and Coquille Plywood, Inc., of Coquille, Ore. Textron now has nine non-textile divisions, hopes eventually they'll produce 50% of total volume.

Fruehauf Trailer Co., through its Roy Fruehauf Foundation, has repaid the \$1.5-million it borrowed from the AFL Teamsters union in 1953. The loan was floated so management could buy enough stock to stave off an attempt by the Detroit & Cleveland Navigation Co. to gain control of Fruehauf (BW-Oct. 31 '53, p133).

Name change: Consolidated Engineering Corp. (BW-Nov. 15 '52, p170) becomes Consolidated Electrodynamics Corp. The company wants to be more clearly identified with electronics.

Sale of two plants brings \$2-million into the kitty for Thor Corp. Last spring when it turned production of its washing machines over to Bendix Div. of Avco Mfg. Corp. (BW-Mar. 5 '55, p84), it began looking for buyers for its vacated plants. Danly Machine Specialties, Inc., of Chicago is now buying one plant for \$1.5-million; Eureka Williams Div. of Henney Motor Co. of New York is paying \$450,000 for the other.

Minneapolis-Moline Co., with its management struggle settled (BW-Sep. 24 '55, p146), is going ahead with plans to close its Louisville (Ky.) farm implement plant and transfer its work to plants at Moline, Ill., and Hopkins, Minn.

U. S. Hoffman Machinery Corp., New York, which produces artillery shells as well as a wide range of commercial laundry equipment and pneumatic machinery, this week bought the "Fein group" of can companies, four container-making outfits headed by entrepreneur Irving Fein. The purchase adds some \$15-million in sales to U. S. Hoffman's present \$42-million volume.

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No More Major Depressions?

We need never suffer another major depression. This is the confident conclusion reached after a year-long study by the U. S. Chamber of Commerce. Taking issue with the notion that what goes up must come down, the Chamber's report states that serious declines can be prevented if we avoid excessive booms.

The report does not say we have conquered the business cycle. It makes clear that minor ups and downs are inevitable, both for the economy and individual industries and companies. But it is convinced that we now possess enough knowledge and tools to keep our economic machine under control.

It cites recent experience in support of its views. For example, it points out that businessmen have made "substantial progress" in overcoming seasonal and other short-term instability by changes in marketing and sales policies.

At the same time, government has demonstrated its ability to cope with economic adjustments. The report praises the recent skill of the Federal Reserve System in pursuing monetary and credit policies that have counteracted inflationary and deflationary tendencies.

The Chamber's report is a timely document. We have learned a great deal over the last three years in forging flexible policies to avoid wide fluctuations.

But knowledge alone is not enough: Government and business alike must have the courage to take prompt action when conditions change. Depressions are man made, and given the tools and the courage to use them, men should be able to stop making depressions.

Before Geneva

Pres. Eisenhower had only one purpose in writing the other day to Premier Bulganin—that was to remind the Soviet leader that the summit conference of July had been held to create "a fresh atmosphere which would dispel . . . fear and suspicion."

The President's reminder was needed. With the Geneva meeting of foreign ministers just a week off, the international atmosphere today is anything but fresh. It has been poisoned by recent Soviet maneuvers in Germany and in the Middle East.

Apparently the Kremlin has decided that, with smiles, Russia can have it both ways—be free to deal with the West and still be free to use every means, short of threatening force, to undermine long established Western positions.

The U. S. and Britain have accepted the Soviet challenge in the Middle East with a coordinated diplomatic counter offensive. Our response gives point to a warning that Secy. of State John Foster Dulles sounded in a speech to the American Legion. He said that he would go to Geneva prepared for a relaxation of international tension. But, he said, we would have a

second policy, designed for a revival of Soviet cold war tactics.

This firm but flexible policy is the right one for the United States today. There has been some danger in recent weeks that, out of disillusionment, we might lose perspective on the summit meeting, and assume that it was all a hoax.

We should not forget that fear of an H-bomb war, on both sides, was the thing that prompted East and West to meet at Geneva in July. As long as any progress is being made toward a plan to prevent nuclear war we should not write off that meeting entirely.

We have been tempted, also, to blame Moscow for all the ferment in the world today. Much of this, including France's trouble in North Africa, arises from the revolution that is sweeping huge areas of the world that had been under colonial tutelage until World War II, or still are. By our own history, and our own preaching, we have encouraged that revolution. We will have to live with its troublesome aspects, probably for the rest of the century. Our job is to see that Moscow doesn't turn it against us.

The Four-Day Week

When actually will we get the four-day working week?

There has been plenty of talk about it over the past few years. But now one man at least, J. Frederick Dewhurst, director of the Twentieth Century Fund, has gone out on a limb with a definite prediction.

His guess, made at the Boston Conference on Distribution this week, is that by 1975, Americans will be working a 32-hour, four-day week.

Dewhurst arrives at his estimate this way:

He figures that productivity should increase at the rate of about 2.3% a year. This would mean an increase in output per man-hour from last year's \$2.41 to about \$3.90 in 1975.

Meanwhile, total employment will reach about 85-million in 1975. By working the 40-hour week, this immense work force would produce an income of \$700-million as against last year's \$300-million.

But, reasons Dewhurst, people won't choose to work 40 hours a week. Historically, since the turn of the century, they have been taking 38% of the increase in productivity in the form of more leisure time. He discounts the 1975 national income according to this ratio and comes to the following conclusion:

"The work week under these conditions would drop from the present 40 hours to 32 hours per week; national income would amount to \$550-billion, and gross national product to perhaps \$650-billion, in terms of the dollar's present purchasing power."

Which is just a longer way of saying that you only have 20 years to wait for the three-day weekend.



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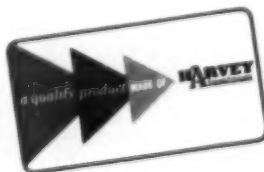
By switching to a Harvey Aluminum Impact Extrusion (left) the manufacturer of this rifle scope (center) both improved his product and made it more profitable in a single step. Impact extrusions provide both the strength and accu-

racy achieved only through one-piece design; yet they completely eliminate the expensive, time-consuming machining needed to make one-piece tubes from solid stock. Also, the part easily takes a hard, permanent finish, and its light weight doesn't destroy a rifle's balance. It's one more graphic example of how Harvey Impact Extrusions make a better product... better to manufacture, better to use. Send today for our latest brochure, "Aluminum Forgings."

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